ABSTRACT

Title of Dissertation:	THE EFFECT OF TWO DEATH EDUCATION PROGRAMS ON EMERGENCY MEDICAL TECHNICIANS
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This study examined the changes in behavioral intent of EMTs in six EMS agencies in Wisconsin after exposure to 1 of 2 death education programs. The effectiveness of the programs was evaluated by a comparison of pretest and posttest scores on behavioral intent of on-scene death-related behaviors using non-equivalent control group design.

One intervention group participated in a 2 day workshop using the *Emergency Death Education and Crisis Training*^{sm} (*EDECT*^{sm}) curriculum. A second intervention group participated in a 2 hour didactic Continuing Medical Education (CME) session on making death notifications. A third group served as a control group and participated in a 2 hour CME session not related to death. Prior to this research, no formal evaluations existed on the impact of these two programs.

Ajzen's (1985) Theory of Planned Behavior was used to predict participant's death-related behavioral intentions, attitudes, subjective norms, and perceived behavioral control towards a behavior. Evaluation included comparisons on multiple measures, which stemmed from the goals of the programs. Study results indicated that the majority of EMTs intend to change their behaviors at the scene of a death after receiving either training program. Changes were greatest for the group exposed to the EDECT^{sm} curriculum.

In addition to testing the hypothesis, several questions explored EMTs' attitudes toward their role on-scene and their previous death-related training. Analysis of these questions show that most EMTs feel that death notifications and helping bereft families are part of their roles as an EMT.

The need for death-related programs to help emergency responders manage bereaved families and the lack of methodologically rigorous evaluation studies of such programs were the principal factors that led to this study. Although there were limitations suggesting caution when interpreting the results, the evaluation showed these programs to be effective in changing the behavioral intent of EMTs. The effectiveness of these programs on EMTs and other emergency providers warrants further study.

THE EFFECT OF TWO DEATH EDUCATION PROGRAMS
ON EMERGENCY MEDICAL TECHNICIANS

by

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PREFACE

Emergency Medical Technicians (EMTs) and paramedics work together everyday treating and transporting the sick and injured. These emergency services providers encounter death regularly in the course of their jobs. Incidents involving a death increase the stress encountered by EMTs and paramedics; calls involving a death notification create even more stress. As stressful as these calls are for the emergency responders, the families who hear a paramedic or EMT utter the words "dead" or died" receive a greater impact. A chapter in their lives has ended, and the emergency services provider influenced their life forever.

The actions and behaviors of emergency services professionals at the scene of a death impact the grief and subsequent recovery of bereaved families. Interacting with families at the time of a death is an underscored role for most EMTs and paramedics. Their training emphasized the clinical aspects of death, often omitting training on making a death notification or interacting with a family at the time of death.

This study attempts to find an effective course to teach EMTs how to make a death notification and interact with bereft families in a helpful manner. These two courses can change the care given to dying patients and their families at the moment of death. A large part of our society was affected by the results of this study, as most of us will be the recipient of a death notification at some point in our lives. For this reason, the results of this study were of paramount importance.

To-

all the EMTs and families
who will live through a death notification

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LIST OF ABBREVIATIONS

The following abbreviations are to assist the reader in understanding concepts relevant to the study.

CME: Continuing Medical Education. A course approved by an educational organization for education in a medical area.

EDECT^{sm}: Emergency Death Education and Crisis Training^{sm}. An educational seminar designed specifically for emergency service personnel to learn about the psychosocial trauma of death and mitigating the effects of such trauma.

EMS: Emergency Medical Services. A national network of services coordinated to provide aid and medical assistance from primary response to definitive care, involving personnel trained in rescue, stabilization, transport, and advanced treatment of traumatic and medical emergencies (Saunders, 1994).

EMT: Emergency Medical Technician. The basic level provider of emergency care. This individual has received formal training and is appropriately certified (Bledsoe, 1991).

NSC: National Standard Curriculum. A published curriculum from the National Highway and Transportation Authority to train EMTs and paramedics.

LIST OF DEFINITIONS

The following terms are defined to assist the reader in understanding concepts relevant to the study. Additional terms are defined as they are presented in the text.

Allied health provider: The term used to describe ancillary health care professionals, apart from physicians, and nurses. This term includes paramedics, EMTs, respiratory therapists, and physical therapists (Saunders, 1994).

Attitude toward behavior: Personal evaluation of a behavior. Degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (Ajzen and Madden, 1986).

Behavior: An overt action under an individual's volitional control and within the individual's capability (Ajzen and Fishbein, 1980).

Behavioral Intention: Motivational factors that influence behavior. Indication of planned effort to perform a behavior (Ajzen and Madden, 1986).

Field: The environment from the moment of injury or illness until the hospital is reached.

Paramedic: A person who successfully completed a paramedic training program included or equal to the Department of Transportation standard paramedic curriculum and received the appropriate certification. A paramedic provides the most advanced and invasive procedures of all the EMS providers (Bledsoe, 1991).

Perceived Behavioral Control: Perceived ease or difficulty of performing behavior question (Ajzen and Madden, 1986). An individual's confidence in ability to perform the behavior in question (Ajzen, 1991).

Prehospital: Term often used in place of the *field* referring to the environment from the moment of injury until the patient reaches the hospital (Saunders, 1994).

Thanatology: The field of study related to death, dying and bereavement.

CHAPTER I - INTRODUCTION

Statement of the Problem

Emergency Medical Technicians (EMTs) and paramedics, collectively labeled

Emergency Medical Service (EMS) providers, are among the newer professionals in

medicine. In the 1960s, this new profession, charged with responding to the needs of

victims of sudden illness and accidents, realized their professional role was to save

victims from death (Stewart, 1979). Today, most EMS providers perceive death as the

enemy and saving lives as their primary role (Palmer 1983b). When EMTs respond to

incidents involving a patient's death, they often have little interaction with bereaved

persons. Many times, family members are not on-scene of deaths occurring outside the

home under traumatic circumstances.

Even when the death occurs in the home, EMTs often have a limited role with the

grieving family. In the past, EMTs and paramedics transported cardiac arrest patients to

the nearest hospital. EMS providers spent a small amount of time on-scene prior to

rushing the patient to the hospital. The hospital physician pronounced the patient dead.

Although families were in a crisis state during the resuscitation efforts by the EMS

providers, the EMTs did not make the death notification or react to the family's grief.

Therefore, EMTs and paramedics had limited opportunities to make death notifications.

For these reasons, there was little or no contact between EMS providers and newly

bereaved persons.

At the time of death notification, families' psychosocial needs change

dramatically (Cauthorne, 1975; Ordog and Wassenberger, 1986; Willis, 1997). In the

past, EMTs did not assist families with these needs, as families were not on-scene or received notification of the death at the hospital. Thus, EMS providers were not required to develop or maintain skills in the caring for bereaved families, including the delivery of a death notification (Ullman, 1997).

End-of-life care is different from 10 years ago and with it, the EMS providers' role at the time of death changed. Today, paramedics and EMTs pronounce death on-scene after unsuccessful resuscitation efforts. At times, doctors now direct paramedics to end resuscitation efforts on-scene (Dalbridge, Fosnecht, Garrison, and Aublee, 1996). In other situations, paramedics and EMTs use protocols to pronounce death on-scene. These protocols, usually created at a state level and supported by local EMS physicians, allow EMTs and paramedics to pronounce death without having to contact a physician. Consequently, paramedics and EMTs have the responsibility of making the death notification and consoling the family, as well as, pronounce someone dead. Of patients who die outside the hospital, EMS providers convey 83% of death notifications (Norton et al., 1992).

EMS providers who make death notifications also counsel families and provide the initial emotional support. These roles are uncomfortable and unfamiliar for most EMS providers (Coleman, 1993; Leash; 1993; Norton et al., 1992). It is not surprising therefore, that many paramedics and EMTs seek education on making death notifications effectively and mitigating the family's grief (Coleman, 1993).

Educational courses for EMTs and paramedics must be unique when compared to death education courses for other allied health providers. Courses for EMS providers must encompass the diversity of the different types of death yet focus specifically on the

differences between hospital and prehospital death. The trauma of grief after a death in

the emergency setting requires special knowledge and a unique repertoire of skills (Dubin

and Sarnoff, 1986; Gifford and Cleary, 1990; Jones and Butte, 1981). Few death and

dying courses teach medical professionals to interact appropriately with families at the

moment of death (Field and Howells, 1988; Olin, 1972; Tye 1996), and most courses do

not cover the unique features of death in the prehospital setting (Smith, Walz, and Smith,

1999). Therefore, EMS providers seeking classes to meet their professional needs will

not find traditional death and dying courses acceptable. Lack of advertising, ignorance of

available death-related courses, lack of courses directed towards the prehospital setting,

lack of appropriately trained instructors, and reluctance of EMS educators to underscore

the importance of such courses may contribute to scarcity of available death and dying

courses for EMS professionals.

Few resources are available for EMS educators to initiate new course materials to

help reduce the educational void (Smith, et al., 1999). Even if EMS educators desired to

initiate course work relevant to prehospital death, they would find limited resources to

help guide the curriculum development process. Traditionally, EMS educators follow a

national curriculum (NHTSA, 1998), and do not develop their own. Therefore, EMS

educators may confront additional bureaucratic barriers when developing new curricula.

The challenge is to provide education and training in an unfamiliar domain, that

is, on death and grief. EMS programs include only a small amount of training and skills

on death and grief issues (NHSTA, 1998). In the last decade, most EMS programs

increased time devoted to death-related subjects; however, they continue to emphasize the

medical and technological characteristics of death (Smith & Walz, 1995). Only a small

portion of the curriculum addresses the psychosocial aspects of death (Smith and Walz, 1995), and most omit instruction on the death notification process (Ullman, 1997). For example, the National Standard Curriculum (NSC) omits objectives related to making death notifications and intervening with the family (see Tables 1 and 2) (NHTSA, 1995; NHTSA, 1998). Thus, EMS providers, trained using this curriculum, do not graduate with the necessary skills to help families at the time of death (Smith and Walz, 1995).

Table 1

Emergency Medical Technician-Paramedic National Standard Curriculum -1988

Section 1:   Preparatory   Sub-Section 2:   Well Being of the Paramedic
    1.2.27   Describe the stages of the grieving process (Kubler-Ross).
    1.2.28   Describe the needs of the paramedic when dealing with death and dying.
    1.2.29   Describe the unique challenges for paramedics in dealing with the needs of children and other special populations related to their understanding or experience of death and dying.
    1.2.42   Defend the need to respect the emotional needs of dying patients and their families.
Section 1:   Preparatory   Sub-Section 4   Medical/Legal Issues
    1.4.25   Explain the purpose of advance directives relative to patient care and how the paramedic should care for a patient who is covered by an advance directive.
    1.4.26   Discuss the responsibilities of the paramedic relative to resuscitation efforts for patients who are potential organ donors.
    1.4.34   Defend personal beliefs about withholding or stopping patient care.
    1.4.35   Defend the value of advance medical directives.

Emergency Medical Technician-Paramedic National Standard Curriculum 1985

Division I, Section VII.
    1.7.10   Describe the stages of the grief process.
    1.7.11.1 Describe common needs of a) the patient, b) the family, and c) the EMT-P in dealing with death and dying.
    1.7.11.2 Describe common management techniques used by the EMT-P when a patient is dead or dying.
    1.7.11.5 Identify issues of controversy in prehospital care involving death and dying.

Most EMS providers will not receive additional death-related education after graduation. In a survey of the 200 largest U. S. cities, only 13 percent provided death-related training for EMS personnel (Streger and Kelly, 2000). Moreover, paramedics and EMTs who actively search for classes to acquire these new skills become disappointed when they find few courses that focus on death in the emergency setting. Thus, few EMS providers acquire these skills after graduation (Shanaberger, 1988).

Table 2

Emergency Medical Technician-Basic National Standard Curriculum: 1999

Module I, Lesson 1-3

1-3.2	Discuss the importance of Do Not Resuscitate and local or state provisions regarding EMS application
1-3.10	Discuss considerations of the EMT-Basic in issues or organ retrieval.
1-3.13	Explain the role of EMS and the EMT-Basic regarding patients with DNR orders
1-3.14	Explain the rational for the needs, benefits, and usage of advance directives.
1-3.15	Explain the rationale for the concept of varying degrees.

With training programs and continuing medical education (CME) offerings ignoring the importance of the psychosocial aspects of death (Smith and Walz, 1995), it is not surprising that the majority of EMTs and paramedics feel inadequately trained to make compassionate death notifications (Norton et. al, 1992). "Most [EMS providers] must learn how to cope on their own because training programs focus on techniques to save lives, not deal with death" (Paulson, 1987 p. 34).

Many times an EMT learns how to make a death notification from on-the-job training. For example, a new EMT watches a senior paramedic make a death notification. However, this strategy may not be the most effective as families report negative experiences with EMS providers at the time of death (Critz, 1989). The most recent studies show that on-the-job training and personal reading are the most common sources EMS providers use to learn about dealing with families at the time of death (Norton et al., 1992).

The lack of available death-related courses for EMS providers, the paucity of literature on death in the emergency setting, and the uprising need to train EMTs and paramedics to assist bereaved persons provide the basis for a new course. The EDECT [sm] program and the 2 hour CME program arose from these concerns. These two courses provide education about death and dying designed specifically for the needs of emergency responders. These courses ostensibly teach paramedics and EMTs many new skills. Course participants learn how to reduce the trauma of a death notification, help mitigate grief, and respond to legal and ethical issues surrounding death (see Appendix A and B for a full description). Yet, formal evaluations are lacking, so it remains unclear whether these programs will benefit EMS providers and bereft families, and if so, why they are effective.

Thus, the primary goal of this study is to investigate the effects of the EDECT[sm] program and 2 hour CME session on the intentions of EMTs to perform specific death-related behaviors at the scene of a death.

<u>Significance of the Study</u>

This study is important for several reasons. First, a paucity of research exists on the effects of death-related education for EMS providers. A review of the literature found few, if any, articles reporting about death education for EMS providers. Coleman (1993) found that a death education course did not change EMT-trainees attitudes towards death. Generalizing the results of Coleman's study to practicing EMTs and paramedics poses problems, as the experiences of working paramedics differ vastly from those of inexperienced EMT-Trainees. Therefore, there is a need for research using both EMTs and paramedics as participants.

Second, there is a need for evaluation of the EDECT^{sm} program and 2 hour CME session. In the literature review, the EDECT^{sm} program appears as the only published course specifically designed for emergency providers. Many EMS educators may be using this unevaluated program to teach about death and grief not knowing its effectiveness. Therefore, it is important to understand the effect of these programs.

Third, this research affects EMS providers and many bereaved persons who receive death notifications nationwide. If the courses become beneficial to the various emergency responders nationwide, it could have a tremendous impact. According to the data coordinator of the EMS Bureau in Wisconsin, there are 11,889 EMTS and 1,972 paramedics currently active in the state of Wisconsin (A. Moses, personal communication, January 12, 2004). In the state of Maryland, there are over 30,000 EMS providers, most of which are EMTs (MIEMSS, 2003).

Nationwide there are 122,579 paramedics and at least one million EMS providers (State and Providence Survey, 1999), the majority being EMTs. These professionals

respond to many prehospital deaths. The 2001 death rate was 854.5 per 100,000

population with over 2.4 million deaths (NCHS, 2003). More than 20% are pre-hospital

deaths (NCHS, 1994). Prehospital death will increase as more patients are returning

home to die. As a result, EMT and paramedics will pronounce more patients dead

(NCHS, 2003).

Today, most EMS providers respond to pre-hospital cardiac arrests as a part of

their regular duties. Some declare patients dead on-scene while others will attempt

resuscitation on patients at the scene and continue these efforts on the way to the hospital.

Most often doctors pronounce these patients dead after an unsuccessful resuscitation

effort in the emergency department. With many bereaved persons per death, a large part

of society interacts with EMTs and paramedics when a death occurs. With paramedics

affecting a large part of society, they need proper training.

Fourth, most researchers chose to evaluate the success of their death-related

courses on a single measure, most often in the affective domain (Laube, 1977; McClam,

1980; Ravazi, Delvaux, Farvacques, and Robaye, 1988). Assessment in only one domain

providers an inadequate measure of course success, and is one of the largest

methodological flaws in the evaluation of death education courses (Niemeyer, 1994).

Typically, most researchers chose to use an instrument measuring death anxiety or

death attitude. Even if positive changes occurred with this measurement, the reasons

underlying this change would be obscure. Omitting an examination of the assumptions

that underlie changes in participant's attitudes and behaviors produced another large

methodological flaw. Therefore, this study evaluated the effects of the two proposed

programs using a carefully selected health behavior theory. After a thorough review of

the literature, Ajzen's Theory of Planned Behavior (see Figure 1) was selected, in part, because of it widespread use among health behaviors. This theory allows for the prediction of behavior based on changes in attitudes, social norms, perceived behavioral control, and behavioral intent. The selection of this theory is further discussed in chapter 5. Use of this theory helped clarify the effect of these two courses on EMTs and the assumptions underlying changes in their behavioral intentions.

Figure 1   Theory of Planned Behavior
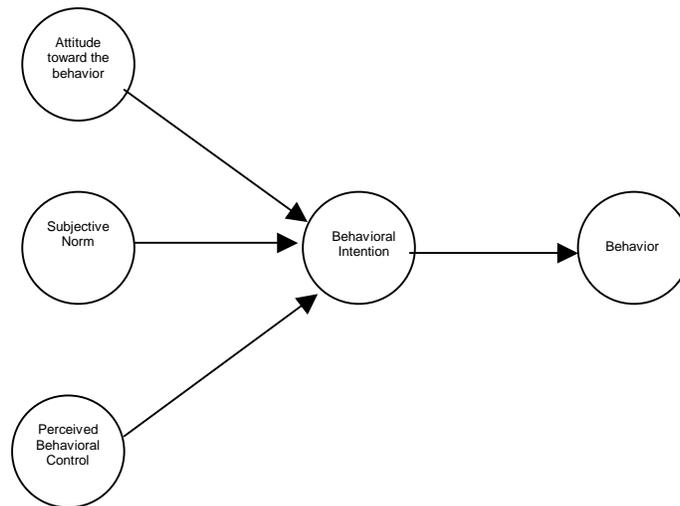
Source: Ajzen and Fishbein, 1980

Fifth, this study provided a methodologically sound model for subsequent evaluations. Although this study was initially designed to use a random sample, this proved problematic (see chapter 3 for explanation). Therefore, this study used a non-probability sample, a convenience sample with intact groups. A non-equivalent control-group design was used in this study. This helps generalize the results to other EMS groups and provides motivation to study these programs in other emergency providers.

Sixth, making death notifications and dealing with a family's grief at the time of death stresses EMS providers (Clark and Labeff, 1982; Marrow; 1996; Meoli, 1993; Miranda and Broady, 1992; Norton et al., 1992) and may be the cause of heightened death anxiety among EMS providers. Coleman (1993) suggests that attrition of EMS personnel may be caused by a high level of death anxiety. The EDECT[sm] program and the 2 hour CME session may help decrease the impact of this stress. This research effort does not measure stress;however, follow -up studies can be conducted to ascertain their effect on the stress levels of emergency providers.

Seventh, this study provided direction and justification for future research on how best to educate EMTs and other emergency responders on death-related issues. For example, this study provides the measurement of six specific intentions to perform a given behavior and the underlying assumptions for changes in these intentions. These six specific questions serve as the dependent variables in the hypothesis below. Although it is important to measure actual behaviors, EMTs perform at the scene of a death, which is beyond the scope of this research. In this study the precursor, behavioral intent, was used.

Identified from the goals of the programs (see appendix A), several death-related behaviors provided a basis for measurement, understanding, and replication. EMS educators can modify or replicate this work by measuring changes in EMTs' behavioral intentions (or better, behavior) when they evaluate their programs.

In summary, EMTs and paramedics need courses to teach them how to make death notifications and interact with bereft families; they need more training. These two courses provide a potential solution to this training deficit. In addition to reducing the educational deficit, several other rational for this study are presented in chapter 2.

<u>Hypotheses</u>

1. EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to use the words "death," "died," or "dead" more often than those EMTs receiving no intervention.

2. EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to use successive preannouncements more often than those EMTs receiving no intervention.

3. EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to leave follow-up information for families more often than those EMTs receiving no intervention.

4. EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to allow families to view the body on non-crime scenes more often than those EMTs receiving no intervention.

5. EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to assist families in managing their grief more often than those EMTs receiving no intervention.

6. EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to use the 4 step death notification process more often than those EMTs receiving no intervention.

7. EMTs who complete the EDECT^{sm} program will change their behavioral intent of on-scene death-related behaviors more often than those EMTs receiving the 2 hour CME session.

<u>Limitations</u>

The primary limitation to this study was not measuring the behaviors of the

EMTs. This study only reports the EMT's intention to perform a given behavior and not

their actual behavioral performance. This represents a weakness in this study design. A

follow-up research study would make an important contribution to this research effort.

EMTs working for six different EMS agencies in Wisconsin volunteered as subjects. These EMTs may not be representative of EMTs nationwide; thus, the results may not generalize to other EMS samples, which also limit the usefulness of the results. Soliciting participants from six agencies rather than a single department increases the validity; however, the programs will need further testing in other samples.

The characteristics of the study sample pose another limitation. EMTs attended different training programs prior to employment; thus, did not receive the same initial training on death and dying issues. A wide variety of death and dying education exists among the EMS programs (Smith and Walz, 1995). Some EMTs may have received more and/or diverse training in death and dying. To eliminate this potential confounding factor, a question on the demographic questionnaire ascertained prior training in death and dying. If significant results arose from this question, previous death and dying training would have been controlled for in the analysis phase.

The third limitation arose from having the program developer present the EDECT[sm] program and CME session, a source of bias. However, the special needs of the target audience, the uniqueness of the curricula, and results of previous research (Mitchell, 1983b) suggests that it is an acceptable first step to evaluating programs. Using the primary investigator to serve as the principal instructor also introduced a bias in conducting the evaluation. To help reduce this bias, administrators assisted in overseeing the evaluation process and collecting the evaluation data. Despite this bias, this research presents useful perspectives on educating EMS providers about death and dying.

A fourth limitation evolved from the lack of defined theoretical constructs that suggested hypotheses to measure. Although grounded in Adult Learning Principles

(Knowles, 1980) and Bandura's Social-Cognitive Learning Theory (1977), the programs represent atheoretical programs and do not provide hypotheses to measure. This lends to less accuracy in providing support for course outcomes. However, using the Theory of Planned Behavior in the evaluation process helped identify the effectiveness of the programs and the assumptions that underlie behavioral changes occurring from the program (see Figure 1). The Theory of Planned Behavior provided insight into the antecedents of an EMT's behavior when confronted with death on-scene. This allows other researchers to suggest and test hypotheses in future studies.

The fifth limitation related to the sensitivity of the evaluation instrument. If the instrument lacked sufficient sensitivity, it many not have discerned significant changes in the participants. To reduce the possibility of this Type I error, the instrument was pilot-tested to estimate its sensitivity, reliability, and validity. Additionally, the instrument asked participants to self-report their behavioral intent exposing opportunities for participant's bias. Changes in participants' behavioral intentions are not behavioral change, per se. They are reports of the participant's intention to perform a given behavior and not actual observed behaviors or self-reported behaviors. This also may contribute to a Type I error. Chapters 2 and 3 provide further understanding for using the Theory of Planned Behavior to evaluate these programs.

The sixth limitation related to the pilot testing process. The pilot testing on the programs (EDECT[sm] program and 2 hour CME session) and instruments occurred separately; they were not piloted together at the same time. The 2 hour CME program has been offered to all different types of EMS providers (first responders, EMTs, and paramedics), as well as, EMS support personnel (physicians, nurses, firefighters, and

chaplains). Groups ranging from 6 to 100 participants participated in the program locally

and nationally. No formal quantitative evaluations exist from these pilots, but most

sponsoring groups asked participants to complete an evaluation at the end of the program.

Many different organizations or groups, including the International Critical Incident

Stress Foundation, the Journal of Emergency Medical Services, several local hospitals,

fire departments, and EMS organizations, conducted these evaluations. This unpublished

data remain with the sponsoring organizations. Data from these evaluations provided the

basis for program improvements and modifications.

The EDECT^{sm} program, piloted at the 2000 Colorado Symposium on Emergency

Care, was offered as a pre-conference workshop. Students enrolled voluntarily and paid

for the program. Ten participants enrolled; all of them were either EMTs or Paramedics.

All participants finished the program. The San Juan Basin Vo-Tech School collected

qualitative data after completion of the course. This data provided an additional

opportunity to refine the program. No major changes occurred to the basic structure of

either program. In the EDECT^{sm} program, the most significant change was incorporation

of more experiential exercises. The data showed that participants wished they had more

time for interaction and discussion of the concepts presented in the course. Subsequently,

the experiential component of the EDECT^{sm} program starts earlier than it had in the past.

Due the lack of significant problems and changes in the programs, further pilot

testing appeared unnecessary. Pilot testing of the instrument is described in chapter 3.

The selected data collection procedures are not logistically complex and can be

incorporated into the programs with relative ease. Testing both together would provide

little additional insight. This suggests that a pilot test using these quantitative instruments with the proposed programs would serve of little value, if any.

Summary

Changes in the end-of-life care created new roles for EMS providers. EMTs and paramedics may now stop resuscitative measures and pronounce death on-scene. They now deliver the death notification and respond to the initial grief reactions of the family. EMS providers having little preparation for these new roles feel inadequate to make death notifications (Norton, et al., 1992).

In an attempt to address these issues, this study investigated the effect of two different death education programs on EMTs. These programs can become a resource to EMTs and paramedics who desire a new set of skills to use on death-related incidents. Additionally, the process of creating new educational programs helped elicit information regarding death-related stressors and EMTs' salient beliefs regarding death notifications. Using the Theory of Planned Behavior in this study aided this process. With this knowledge, administrators and educators will be able to design appropriate, valid, and reliable courses based on research. When these programs are further validated, they will help mitigate the stress to those who receive death notifications and to those EMS providers who make death notifications.

CHAPTER II - REVIEW OF THE LITERATURE

The Civil War and Clara Barton's radical principle of "treat em where they lie" formed the early foundations for the modern EMS profession and subsequent training standards (Stewart, 1979). When the modern profession of EMS began in the late 1960s only one level of EMS provider existed, the Emergency Medical Technician (EMT). Paramedics emerged a decade later. Today, there are several levels of EMS providers, which can vary from state to state. In all states, paramedics provide the most skilled care of all EMS professionals. EMTs comprise the majority of the EMS workforce and provide basic emergency care. The education for all of these prehospital professionals emphasizes forestalling, overcoming, and evading death (Palmer, 1983b). Death is the enemy, preservation of life a primary goal.

In the early days of the EMS profession, regional, state, and federal governments unilaterally created and refined guidelines for EMS professionals. Soon thereafter, the federal government recognized the need for a National Standard Curriculum (NSC) for all EMTs (Walz, 2000). This curriculum, completed in 1974, became the first standardized training guideline for EMTs (DHEW, 1974). Since the initiation of the curriculum in 1971, EMS educators have updated it several times and later added a National Standard Curriculum for paramedics (NSC-Paramedic). The paramedic curriculum, originally published in 1983, is now in its third edition (NHTSA, 1998). Both of these curricula contain few objectives related to death and dying (see Tables 1 and 2). The majority of EMS educators use these curricula to guide their programs. Thus, the majority of EMS educators use few objectives to guide instruction related to death and dying.

<u>Death Education Training in Emergency Medical Services Programs</u>

       The initial guidelines (DHEW, 1974) for training ambulance personnel (EMTs)

detailed the behaviors appropriate for EMTs when responding to prehospital deaths. The

section, <u>Duties as an Attendant</u>, described several behaviors and responsibilities related to

death incidents. For example, the section, <u>Disclosing Bad News</u>, states that the EMT

"creates proper atmosphere; displays attitude to mitigate bad effects; [and] demonstrates

sympathetic air" (DHEW 1974, p. 7). This section also includes guidelines for providing

religious comfort in the face of death and caring for the dead body. According to the

guidelines, the EMT "shows courtesy, respect, and consideration in handling and

exposure of the deceased" (p. 7).

       The current paramedic and EMT curriculums lack specificity; the paramedic

curriculum provides only five general objectives related to death and grief, none

pertaining to death notifications (see Tables 1 and 2). The current paramedic curriculum

allots only eight hours to cover all behavioral emergencies and only a fraction of this time

covers material about death and dying (NHTSA, 1998). The EMT curriculum allots less

time (see Table 2); thus, EMS educators spend an inadequate amount of instructional

time on death and dying issues. The previous curriculum (NHTSA, 1995) also did not

cover many of the areas germane to dealing with a patient's death on-scene (see Table 1).

This shows that very few objectives were modified or changed in the curriculum despite

the interest of EMS providers to have education in this area. Furthermore, current EMS

textbooks do not cover these issues well. Often, authors of EMT textbooks try to

encompass all death-related issues in a page or two of text. In summary, little educational

materials are available to EMTs educators to teach EMS providers about death and dying issues.

As early as 1979 (O'Keeffe), researchers identified the importance of teaching about the non-clinical aspects of death. In a non-experimental pretest-post test design, Bassuk, Apsler, and Jacobs (1983) found a workshop on behavioral emergencies, including death and dying, was very effective in small group of EMT and paramedic trainees. They evaluated their program with a survey and concluded that behavioral emergencies, including death, comprise a critical category of EMS education and that it remains a neglected area. One student summarizes this neglect, "Teaching of things like explaining death to relatives is avoided," and "I feel you are left to sort of fend for yourself" (Charlton, 1993, p. 448). A paramedic stated, "empathy and compassion are not taught in EMS programs," and "We have learned much patient care, but not very much people care" (Taigman, 1996, p. 45). Almost all EMTs and paramedics recommend death and dying instruction in primary training programs and suggest it as a topic for CME classes (Norton, et al., 1992, Iserson, 2000). In the conclusions of a survey, Norton et al. suggested that additional education, specific to the needs of EMS providers, might serve to reduce the stress of death notifications. Yet, EMTs and paramedics still struggle to find courses that teach about the psychosocial aspects of prehospital death.

It is not surprising that EMS providers struggle to find education about caring for bereft families in the field. EMS educators spend the least amount of time on psychological and social issues compared to the clinical or legal issues surrounding death (Smith and Walz, 1995). EMS programs underemphasize death-related education and

relevant CME courses are sparse. EMS educators may not understand the importance of teaching about the psychosocial aspects of death.

In the EMS profession, few peer-reviewed journals and only a handful of trade magazines exist. With few EMS journals, educational programs mature slowly, gaps in education prevail, and the importance of new programs remains underscored. Early on, in 1983, Palmer identified the paucity of literature regarding EMTs and paramedics; despite this, the literature remains inadequate. For example, only a few isolated studies exist on the amount and type of death-related education for EMS providers (e.g., Coleman, 1993).

Many EMS educators (67%) report that they provide formal training in death and dying to their students (Smith and Walz, 1995). This contradicts the above findings. Many programs omit death-related training (Smith and Walz, 1995); this underscores the importance of the psychological and social aspects of death and dying. Therefore, EMTs may be receiving education about death and dying, but it is not helpful to them when they are on-scene facing a grieving family, as it does not address the psychosocial issues of death.

Death and dying education influences an EMT's decisions on-scene at the time of patient's death (Norton et al., 1992). Of the EMTs and paramedics who receive formal training in death, some are more likely to start resuscitative measures on cardiac arrest patients than others are. Research has found that found that EMS professionals who receive their training from EMS educators are more likely to start CPR on unresuscitatable, non-viable patients than EMS providers trained at hospitals by hospital personnel (Hick, Mahoney and Lappe, 1998; Norton et al., 1992).

When EMS providers are surveyed, they report that the most common type of

death and dying education they receive is through their own reading (Norton, et. al,

1992). Norton et al. surveyed over 600 EMS providers about their experiences, attitudes,

and previous training related to death and dying and found that individual reading (60%)

was twice as prevalent as any other training source. The authors provided no information

on the quantity or extent of the readings. Individual reading did not appear to help EMTs

and paramedics, as it did not show a significant correlation to their behaviors on-scene,

e.g. which patients they resuscitated or perception of stress (Norton, et al., 1992). It is

unclear why the researchers in this study chose to include individual reading as a type of

formal training. EMS providers cited hospital-based CME courses (31%) as the second

most common source of training.

According to Norton et al., EMS providers receive significant education regarding

the clinical aspects of death and limited or no education about the psychosocial aspects of

death. The survey conducted by Norton et al. provided limited information about the

needs and attitudes of EMT and paramedics. Researchers need to explore further the

attitudes of EMT towards their death-related training and future educational needs in this

area. Therefore, one research question in this study was to ascertain if EMTs had

previous training in death and dying. Furthermore, two other questions explored whether

EMTs felt that this training met their professional needs.

Additionally, hospital trained EMSproviders had less emotional difficulty during

notifications and when dealing with bereaved families. Hospital trained EMS providers

were more likely to declare death on-scene and not resuscitate a clearly dead patient that

EMS providers trained from other educators (Norton et al., 1992). This suggests that

training influences resuscitation decisions and interactions with bereaved persons. It also suggests that education received from EMS-based programs may be less beneficial to EMTs and paramedics compared to training received from hospital training programs (e.g., Coleman, 1993), or independent programs (e.g., EDECT[sm]). The explanation for this remains unclear. The experience and preparation of the instructor or the location of the institutional setting may be explanatory factors. Hospital-based programs may use a registered nurse, chaplain, social worker, or other health care professional to teach about death and dying. Whereas, college-based programs or vocational-technical school programs typically use a paramedic to teach about death and dying (Smith and Walz, 1995). Most educators teaching EMS death and dying classes are paramedics themselves and may not have the essential training to teach about death and grief (Smith and Walz, 1995). If researchers and educators in the EMS community look toward creating and validating death and dying courses for EMTs and paramedics, then graduates of such courses who become instructors will have the necessary background information to teach death and dying instruction to others.

In summary, EMS educators may present information on death and dying without specifically instructing EMTs and paramedics how to make death notifications and to respond appropriately to survivors (Iserson, 2000; Norton, et al., 1992; Smith and Walz, 1995). The current NSC does not contain objectives specific to death notifications only general objectives about death and grief (NHTSA, 1998). Thus, educators who follow the recommended guidelines would present little, if any, information about death notifications. EMS textbooks offer little additional help. If these educators chose to look

beyond the curriculum and EMS textbooks, they would little supplemental teaching information.

After an exhaustive literature review, only five articles concentrate on death education for paramedics and EMTs. Most of the articles report the author's experience or opinion on how or what should be taught to EMS providers. Only one of these articles tested the program in a controlled trial (Coleman, 1993). Coleman provided little information about the actual content and objectives of the program he used; however, he did include information on the topics and issues germane to paramedics and EMTs at the scene of a death. The program tested in Coleman's study, a nine-hour single day instructional unit, used a variety of teaching mediums throughout the course. Based on an existing death anxiety scale, changes in the EMTs' death anxiety level, the sole outcome measure, was not significant. Additionally, the participants were not practicing EMTs or paramedics, but all were volunteer EMT trainees with no previous field experience. The researchers may have missed changes in other learning domains that were not measured.

Furthermore, participants received a follow-up measure eight weeks after the intervention. This short interval may not have captured changes in death-related attitudes, as death-related attitudes often do not change quickly (Rodabough, 1981). These methodological flaws further reduce the validity of the results. Overall, the study was a positive, yet limited, contribution to the literature on EMS professionals and death education courses. However, the results of Coleman's study do not generalize to practicing EMS providers as researchers have reported that job experience mediates the relationship between EMS providers and bereaved families (Norton et al., 1992).

The second article that reported about EMS providers dealing with death in the field is the *Death Notification Outline for Fireman and Paramedics* (Ullman, 1997). The author describes a process to make death notifications. The outline included only one-dimension, death notification, and failed to cover issues such as caring for the body or helping the family. The author did not provide an evaluation of the effectiveness of the outline; nor, did he cite which research guided the development of the outline. The outline stemmed from the author's personal experiences; for these reasons, the usefulness of the outline remains unknown.

The third article summarized the Mothers Against Drunk Driving's (MADD) *Death Notification Curriculum* (Lord, 1990). Lord tested the MADD's curriculum using informal qualitative measures in convenience samples and found the curriculum to be effective (Stewart and Lord, 1999). However, the evaluation was plagued with methodological weaknesses. Like the above-mentioned death notification outline, the MADD curriculum offers little additional insight in that it only addresses a narrow area of the death process, the death notification.

The next article, "*The Death of a Child in the Emergency Department*" focuses on the needs of grieving parents, a very specific population of grievers (Knazik, et. al, 2003). Although some of the principles developed in this article can be used in the prehospital environment, much of it does not apply to the prehospital setting. Thus, it appears to have limited value to EMS providers. Furthermore, the article does not provide an evaluation of the program; it simply describes the program and provides its justification with minimal support from existing research.

The final article found in the literature presents the process used to develop an educational tool (videotapes) to teach how to tell family members about an unexpected death (McQuay, Schwartz, Goldblatt, Giangrasso, 1995). The videotapes was developed and tested on emergency room physicians and medical students in a small convenience sample. The authors reported preliminary data suggesting its effectiveness. The article reports that the final data is forthcoming, as well as, random controlled trial, but these were not found in the literature review. Thus, this tool cannot be deemed effective without further studies to validate the video and accompanying lecture.

Recently, a book was published for professionals who deal with unexpected deaths. *Grave Words: Notifying Survivors About Sudden, Unexpected Deaths* (Iserson, 1999) provides a comprehensive manual for death notification. One chapter covers issues unique to EMS professionals. Currently, it provides the most significant contribution to the literature available for EMS providers. The protocols and techniques presented in the book have not been evaluated for their effectiveness; however, physicians who have provided book reviews have suggested it to be a valuable resource to their fellow physicians (Sally, 2000). Upon this author's review, it contribution is limited by the inclusion of only one area, the death notification. It provides only superficial information about grief and interacting with families at the time of death.

The final item in the literature review is part of the International Guidelines for CPR (cardiopulmonary resuscitation) and ECC (emergency cardiac care). In 2000, the American Heart Association established these guidelines for physicians, nurses, paramedics, and EMTs. Part two of this document details the ethical aspects of CPR and ECC including advance directives, living wills, and the Patient Self-Determination Act of

1991. The guideline covers the principle of futility, criteria for not starting CPR, criteria

for termination of resuscitation, and do not attempt resuscitation orders.

The final section of these guidelines provides very general and very brief

information on making a death notification and managing families at the scene of a death,

with only three paragraphs allotted to each topic. This was surprising as the guideline

lists as three of its most important changes as: (1) Support for the family at the scene of

resuscitation attempts; (2), honoring prehospital advance directives; and (3), survivor

support after death pronouncement on-scene. Even if these guidelines detailed directions

on how to make a death notification or interact with newly bereaved families, most EMTs

would not see these directives.

Most EMTs and paramedics never read these guidelines. Instead, they receive

(and read) the Advanced and Basic Cardiac Life Support (ACLS and BCLS) books. The

ACLS book provides two pages of how to reduce stress to the EMTs and paramedics but

does not provide information on how to make the death notification or interact with the

survivors in a positive manner. The BCLS textbook contains little, if any, information

germane to these issues. Therefore, these guidelines and books do not help reduce the

void of educational materials.

In general, most researchers would improve the utility of their contributions if

they provided comprehensive information. For example, the death notification,

interacting with families including children, and the legal/ethical issues should all be

covered in a death and dying program for EMS providers. Contributions to the literature

base would be strengthened if authors undertook and reported formal evaluations on their

work. This would eliminate the less effective programs and generate interest and modifications in the more effective programs.

Although EMS educators reported that the amount of death education increased in EMS programs (Smith and Walz, 1995), it appears that the available literature, text, and curriculum remain inadequate. Additionally, the breadth of death education for EMS professionals remains limited. Most information centers around the death notification with limited information on managing grief reactions. Thus, a need exists for comprehensive death education programs for EMS professionals a program that is formally evaluated and reported in the literature for others to build upon. This research aims in that direction.

The educators who struggle to find material to guide their lectures and the many paramedics who feel ill prepared to deal with dying patients and bereaved persons supports the creation of new death education programs for EMS providers (Norton et al., 1992). The many EMTs and paramedics who seek out CME sessions on death and dying further supports the development and validation of programs targeting the needs of EMS professionals. Targeting the needs of EMS professionals during a death education course began with an examination of the unique personality characteristics of EMS professionals.

Personality of EMS Persons

Students who show interest in improving their skills during a death notification demonstrate one of the many characteristics of the EMS personality (see Table 3), a desire to be the best at what they do (Mitchell and Bray, 1990). These personality traits

were taken from over 1000 EMS providers who completed the Millon Personality

Inventory (Mitchell, 1984; J. T. Mitchell, personal communication October, 01, 2001).

Mitchell states, "[EMS providers] will keep working to help others even when it may be

hurting themselves" (Mitchell and Bray, 1990 p. 20). Iserson (1999) concurs with

Mitchell suggesting that EMS providers who complete their jobs (i.e., making a death

notification) may be harming themselves (i.e., the stressful effects of death notifications).

However, these authors do not cite evidence for their conclusions.

Table 3 EMS Personality
1. Action-Oriented 2. Have Control of Themselves and of the Situation 3. Risk-takers 4. Center of Attention Seekers 5. Have obsessive and compulsive dispositions 6. Have strong traits of loyalty and dedication 7. Desire to be needed and have "rescue personality"

Source: Mitchell and Bray, 1990

Personality plays an important role in the educational process because an

individual's personality affects the death notification process (Viswanathan, 1996) and

program development (France, 1988; Knowles, 1980). For example, EMS providers like

action-oriented environments. Instructors who create engaging exercises in their courses

may be meeting the needs of EMTs and paramedics more effectively than instructors who

develop passive exercises requiring no action of the students.

Educators need to plan programs tailored to EMS personalities. EMS educators

must also help students explore death at a personal level, as EMS providers tend to

distance death, to push it away. The medical teaching model of technical precision and language complexity, (e.g., euphemisms) further distances EMTs and paramedics from death and those who grieve after a death (Palmer, 1983a). This distancing contributes to the difficulty of making a compassionate death notification and may inhibit learning during death education courses. The elevated death anxiety level of EMS providers, when compared to other occupational groups (Lattner and Hayslip, 1984), will pose barriers to program developers who strive to create programs that allow students to explore death.

Additional barriers are posed by the role of EMS providers. People in society view EMS providers as lifesavers (Palmer, 1983b). EMTs and paramedics often seek and maintain work in the EMS profession because of the importance of saving a life and the esteem connected to their profession. Pronouncing a patient dead creates a conflict within EMS providers. This conflict emerges from their past and current role to save lives, and now their new role, doing nothing to save a life and pronounce death. "Death is frightening for anyone to face, but especially for health care professionals who strive so hard to preserve life" (Green, Shew, and Pulsipher, 1978 p. 295). EMS providers may be resolving this internal conflict while making the death notification to the family. This conflict creates stress within the EMS provider making death and grief-related interactions stressful (Beaton, Murphy, Johnson, Pkie, and Corneil, 1998; Iserson, 1995, Mitchell & Bray, 1990).

As previously mentioned, EMS professionals encounter stress at work. Blood pressure increases on workdays and rises higher during emergency incidents than at the station and non-working days (Goldstein, Jamner, and Shapiro, 1992; Bryant and Harvey,

1995; Jenkins, 1997; Marmar et al., 1999; Mitchell, 1984). For example, EMS providers set an aggressive work pace. The profession demands an expeditious and accurate handling of the sick and injured which further increases stress upon the EMS professional.

EMTs and paramedics learn to work quickly and accurately; thus, on-scene times are short when cardiac arrest patients are transported to the hospital. EMS providers spend an average of 20 minutes on the scene of a death (Schmidt and Harrahill, 1995). This may suggest that EMTs and paramedics rush to move from an uncomfortable stress-laden environment with the grieving family back to the safe confines of the station. Other factors may contribute to scene times, such as other incidents in the area and response time of law enforcement units. Researchers need to ascertain how stress and time spent on-scene interact with each other while controlling for the other situational factors inherent to EMS work.

Reactions from stress cause burnout and other health problems. These appear commonly among EMS workers (Hammer, Mathews, Lyons, and Johnson; 1986; Mitchell, 1983a). Sources of this stress include making death notifications and dealing with bereaved families grief responses, the unknown cause of death, the issue of organ donation, and requests to autopsy the deceased (Iserson, 1999; Mitchell, 1983b; Norton et al., 1992; Swisher, Nieman, Nilsen, and Spivey, 1993). Studies have shown the stressful effects of death notifications on physicians and EMS providers (McQuay et. al, 1995; Raymond, 1988; Saunders, 1982).

Understanding the personality traits of EMS providers and the sources of their stress will help educators refine courses to meet the needs of this unique occupational

group. The success of a death education course for EMS providers depends on accommodations for these personality and job characteristics.

Implications of Death Education Training Programs for EMS Providers

Psychoeducational training programs benefit EMS workers; they serve as a buffer against mental illnesses and maladaptive behaviors (Kagan, Kagan, and Watson; 1995; Lynch, 1989). Although death education courses present opportunities to explore many psychological principles, few studies examine the psychological effects of death education units for EMS professionals. The lack of research and the effects of death-related programs for EMS professionals remaining unknown provided the motivation for the present research. Specifically, this research enhanced the understanding of two death education programs for EMS providers, and identified the reasons for changes resulting from the programs. Furthermore, these two death education courses needed to be developed, refined, and evaluated, both for their implications on EMS providers and for their impact on the families that EMT and paramedics serve. This created another rationale for evaluating these courses, to determine their impact on EMS providers and why these impacts occur.

Implications of Death Education Training Programs on Bereaved Persons

Death notifications can trigger multiple emotional and physical problems in survivors including sudden death (Cottington, Mathews, Talbott, and Kuller, 1980; Engel, 1971; Lundin, 1984; McQuay et. al, 1995; Parkes, 1975). Studies have shown a direct relationship between the stress of bereaved persons and the compassion of the health care providers who interact with families during the death notification process (Creek, 1980;

Haughey, 2000; McQuay, et. al, 1995; Robinson, 1981). All of these studies suggest that death notifications stress families; however, health care professionals mediate this stress response.

Researchers have examined resuscitation and transportation decisions at the time of death (Hick, et. al, 1995; Schmidt and Harrahill, 1995). Of those family members who had the death of their loved one occur on-scene, all indicated they wanted the EMTs to pronounce death on-scene and not transport their loved one to the hospital. Many families reported that resuscitation efforts were too extensive and thought that resuscitation should have stopped sooner (Critz, 1989; Innes and Wanger, 1999). Many of these families felt their loved one suffered during the resuscitation. Inadequate education may increase the stress associated with interacting with family members and making death notifications, which may cause some EMTs and paramedics to start CPR and transport patients to a hospital instead of declaring death on-scene.

EMS providers conveyed the death notification to most of these families. Often the EMS providers did not verbally communicate the death with the family. The EMT or paramedic used body language to convey the death or they waited until the family indicated they knew their loved one had died. Some families (31%) stated that the EMS provider did not tell them directly but just knew their loved one died; this lack of communication resulted in misinterpretations by some families (Schmidt and Harrahill, 1995). Many families viewed EMS providers as nervous, uncomfortable, and unprofessional, which impacted their communications with them (Critz, 1989). More than half of bereaved persons from Critz's study rated their adjustment as poor. These

studies were not randomized control trials, but were retrospective surveys; thus, the results should be interpreted with caution.

The manner in which EMS providers communicate a death notification affects the psychological well being of the survivors (McQuay et. al, 1995; Parkes, 1964a; Walters and Tupin, 1991). Poorly worded death notifications enhance the risk of pathological grief and increase mortality and morbidity in survivors (Parkes, 1964b; Segal, Fletcher, and Meekinson, 1986; Sheskin and Wallace, 1976). Families with unanswered or inadequately answered questions during the death notification process may pursue legal alternatives to obtain these answers (Finlay and Dallimore, 1991). Families who received factual and accurate information were more likely to have healthier psychological adjustments after 3 years than those who received inaccurate or incorrect information (Finlay and Dallimore, 1991). This suggests that the behaviors of EMS providers influence the psychological health and well-being of survivors for many years. EMS educators must recognize this impact and look towards educating EMTs and paramedics to reduce the trauma of death notifications. This provides another reason to evaluate these courses, to ensure that any ineffective principles taught in these courses are not being used on bereft families. Understanding the complexity of death notifications becomes an important first step in this process.

In general, death notifications are complex psychological interactions. Death in the emergency setting further complicates the notification process (Meyers et al., 2000; McQuay et al, 1995; Ordog and Wassenberger, 1986). The suddenness of the death notification and the events that follow allow little time for the family to adapt to the distress (Parish, Holdren, Skiendzielewski and Lumpkin, 1987). Respect and trust,

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present in most relationships, rarely exist in these sudden and forced relationships. The

undefined relationship between the emergency providers and families further increase the

trauma of the death notification.

Additional tasks compete for the EMS provider's time e.g., providing

resuscitative medical care, ensuring the safety of the crew, initiating and maintaining

communications, staging and releasing of other units, caring for the deceased, clean up,

and preparing the unit for the next call. These tasks reduce the amount of time that EMTs

and paramedics spend with bereaved persons. Spending less time with, or avoiding, the

family increases the stress of the death notification to the family leading to poorer

psychological adjustment (Iserson, 1995; Leash, 1994).

Early on, Elizabeth Kubler-Ross (1969), a pioneer in the death education

movement, emphasized the importance of health care providers' support for families to

avoid useless trauma and suffering. Since then, many others have expanded on her

findings. For example, Leash (1994), in his book *Death Notification: a Practical Guide

to the Process* gave emphasis to the notifier providing emotional and psychological

support throughout the process. Iserson (1999) discussed the importance of follow-up

and support for the family of sudden death notifications. In general, families need

support beyond the initial period immediately after the notification.

EMS providers typically have not done this. Many times health care providers who

make death notifications do not treat families with complete emotional support (Jones,

1978). The primary goal of the EDECT[sm] program and the 2 hour CME session is to

rectify this situation to teach professionals how to treat bereaved persons with the

emotional support they need. The next sections focus on how these two programs meet this goal.

Theoretical Considerations in the Development of the EDECT[sm] Program

Although the EDECT[sm] program is not theory driven, two established theories, Bandura's (1977) Social Learning Theory (SLT) and Knowles' (1978) Adult Learning Principles (ALP) influenced the development of the program. Primarily, these theories provided a basis for the selection of teaching methods. These theories also aided in creation of goals and objectives. They are described below along with their contribution to the development of the EDECT[sm] program.

Adult Learning Principles

Knowles postulated that adults learn differently than children; it that; they are more self-directed than children are. These differences underlie the conceptual underpinnings of his model presented in *The Adult Learner: a Neglected Species (1978)*. The model centers around five characteristics, or differences, of adult learners. Adults (1), tend to be self-directed or motivated; (2), they bring real life experiences to class; (3), they want to learn information that is directly related to their lives; (4), they want knowledge and skills immediately useful in their lives; and, (5), they seek knowledge for self-fulfillment, not for external reasons such as promotion.

The Adult Learning Principles (ALP) used during the planning and developing phases of the EDECT[sm] program include (1) the emphasizing of experiential techniques, (2) the use of practical applications, and (3) learning to learn from experience. Learning

to learn from experience occurs when adults look objectively at themselves during a life experience and challenge their preconceptions about an idea that occurred during the event. This becomes particularly important in death education courses as many ideas and attitudes exist in an individual's personality and are expressed only when they death. Challenging an EMS provider's attitudes by bringing an individual's life experience to class can reap great rewards when they make a death notification on-scene.

The EDECT^{sm} curriculum incorporates these five principles into an age-specific course for adult learners. For example, an assumption throughout the program is that the skills and knowledge learned in the program become useful to students professionally and personally. First, the course uses experiential sessions to help students learn how to take the skills learned in the course and immediately incorporate them in their professional work. Second, students who share events from their personal and professional lives increase the intrapersonal richness of the course. Third, students create scenarios to use in role-play exercises; these scenarios become the basis for role-playing of a death notification in later sessions. These methods conform to Knowles' Adult Learning Principles, and they were paramount in course development.

Social Learning Theory

The second theory, Bandura's (1977) Social (Cognitive) Learning Theory (SLT), suggests that humans learn through imitation and reinforcement, and assumes that behavior will change when an individual's perceived self-efficacy changes. As the ability to perform a given behavior increases, so does the perceived self-efficacy and vice a versa. The three important explanatory factors mediating this process are:

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1. Behavioral capacity: having the needed skills to perform the desired behavior. This refers to EMTs having the necessary skills to make death notifications and interact with bereaved families appropriately during the death process.

2. Efficacy expectations: one's beliefs that the behavior can be carried out successfully. This refers to the degree to which the EMTs believe they have the ability to interact effectively at the moment of death.

3. Outcome expectations: the belief that the behavior will lead to the desired outcome. This refers to the EMT's belief that compassion to the family during the death notification process will help mitigate the stress to themselves and the trauma to the bereaved family.

According to Social Learning Theory, direct experience, modeling, verbal persuasion, emotional arousal, vicarious experiences and rewards, performance accomplishments, and self-management modify these three factors. The principles of SLT provided the basis for selecting most of the teaching strategies (e.g., videotapes of death notifications, role-playing exercises, critiques of other death notifications, and victim impact panels). Table 4 provides a list of the teaching strategies used in the EDECT^{sm} program.

The development and design of the EDECT^{sm} curriculum incorporated the principles of adult learners (ALP) and Social Learning Theory (SLT). Additionally, these two theories provided a conceptual framework for the program and aided in the evaluation and replication of the program. Despite these theoretical considerations, these two theories do not provide an adequate medium to test the effectiveness of the program. A more comprehensive theory was needed to test the effectiveness of the programs.

Selection of the Theory of Planned Behavior for the evaluation component is described

later in this work (see page 50).

Table 4 - Instructional Methods Used in the EDECT[sm] Program	
Presentation Techniques 　　Lecture 　　Readings 　　Slides/Computer/Overheads 　　Video/Audio tapes 　　Debates 　　Testimonials 　　Victim Impact Panels	Visual Aids Used in the EDECT[sm] Program 　　Computer-generated graphics 　　Slides 　　Videotapes 　　Audiotapes 　　Overheads 　　Flipcharts/Chalkboards 　　Student Workbooks 　　Handouts
Audience Participation Techniques 　　Question-and-answer period 　　Reaction panel 　　Audience Role-playing 　　Professional Sharing 　　Guided Discussion 　　Case Discussion	Simulations 　　Small-group discussions 　　Role -playing exercises 　　Skill-practice exercises 　　Coaching

The SLT and ALP provided insight into the selections of the teaching

methodologies for the EDECT[sm] program and how best to administer the program to

EMS providers. These theories also prompted selection and preparation of course goals,

objectives, content, methodology of instruction, curriculum, length, format of course, and

program faculty, which are discussed in the next sections.

Goals and Learning Objectives

Goals and learning objectives create the foundation for course development by

providing the basic building blocks of a program. Block (1976) examined the most

efficacious method to teach about death and dying and underscored the importance of

creating goals and objectives. Goals guided many of the early death education programs

(Knott and Prull, 1976). Leviton (1977) examined the importance of program goals for death education courses and suggested that program goals target the students enrolled in the course. Further supporting the need for targeted goals, Dietrich (1980) demonstrated their use in a course for allied health students (e.g., removal of communication barriers between patients and professionals and contribution to the psychological and growth of health care professionals). Leviton and Dietrich contributed to the importance of using population specific goals.

Multiple studies reported on the importance of using objectives to guide death education courses designed for health care students (Babcock, 1990; Benoliel, 1982; Block, 1976; Chodil and Dulaney, 1984; Iserson, 1999; Lockard, 1989; McCorkle, 1982; Papadatou, 1997; Stillion, 1979; Swain and Combs, 1982). A review of these studies showed that many of the objectives of death education courses focused on knowledge acquisition. These results were surprising as knowledge alone is insufficient to bring about changes in attitudes and behaviors (Knott and Prull, 1976). Today, thanatology experts agree that objectives for death education programs should be more inclusive than just knowledge objectives found in most programs. Supporting this, a seminar program structured around Knott and Prull's (1976) knowledge objectives did not change participants' attitudes. The researchers concluded the need for more comprehensive objectives than ones included in the course (Tamyln and Caty, 1984). Few death education programs use objectives encompassing attitudes and even fewer courses include objectives related to changing behaviors (Crase, 1978).

In training health care professionals, knowledge of goals and objectives are necessary, but the behavior and attitude objectives are the most important (Simpson,

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1979). In the EMS profession, education experts view objectives from multiple domains,

as an important part of the effectiveness of the NSC (Jelenko and Frey, 1976; NHTSA,

1998). Consistent with the National Curriculum (NHTSA, 1998), the goals and

objectives of death education courses should encompass the following learning domains

(knowledge, attitude, skills, and behavior). Omission of one or more of these domains

may not adequately address or measure changes in these areas that occur from a death

education course (Kitchen, 1988).

   The goals and objectives, from the EDECT[sm] program, incorporate different learning

domains (see appendix A) and require planning in the course development process. They

stemmed from a careful review of Corr's (1978) model for death education courses,

consideration of the personality traits of EMS providers (Mitchell and Bray, 1990), and

the impact of such courses on EMS providers and bereaved families (Robinson,

Mackensie-Ross, Campbell-Hawson, Egleston, and Prevost, 1988; Schmidt and Tolle,

1990; Tolle, Bascom, Hickman, and Benson, 1986; Tolle and Girard, 1983). Newer

models of grief, such as Corr's tasked-based model or Rando's six *R'* s of grief were not

used in the development of the EDECT[sm] program. However, these models are now

discussed in the grief portion of the EDECT[sm] program.

Educational Methods

      Research has yet to identify the most appropriate educational method to teach

death and dying courses to EMS providers (e.g., lecture, small group discussions, case

studies, patient scenarios, interviews with dying patients, role-plays, and videotapes).

Despite this, lecture has become the most common method used to teach death education

courses to allied health professionals including EMTs and paramedics (Bleeker and

Pomerantz, 1979; Dickinson, Sumner, and Federick, 1992; McQuay, et. al 1995; Smith

and Walz, 1995). The widespread use of the lecture method may stem from early

research showing lectures to be a successful teaching methodology for health care

professionals (Bleeker and Pomerantz). Although studies show the lecture method

unsuccessful in teaching health care students (Papadatou, 1997), most education experts

support its use in EMS programs (Saunders and McKenna, 2001).

The small group discussion appears frequently in death education courses for

health care professionals (Dietrich, 1980). Case studies and patient scenarios provide

other effective teaching methods (Corr, 1978). Including dying patients in discussion

groups can help promote changes in participants' attitudes (Dietrich, 1980; Schmidt,

Norton, and Tolle, 1992). When class participants role-play of death and grief scenarios,

it creates an additional method change participants' attitudes (Schmidt et al., 1992; Tolle,

Coney, and Hickman, 1989; Wager, 1993). Role-plays not only change attitudes, but they

also lead to changes in behavior (Morgan and Winter, 1996).

Many educators effectively use a combination of these methods, such as using

videotapes combined with a lecture program (McQuay, et. al, 1995; Pain, Aylin, Taub,

and Bothia, 1996). In a survey of EMS providers, many requested videotaped reviews of

simulated death notifications (Swisher et al., 1993). When using videotapes, the use of

actual patients and patient's families provides a more effective strategy. If these

resources are not available, educators can effectively substitute videotapes of actors or

peers when needed (Kitchen, 1988; McQuay, et. al, 1995). EMS providers also

frequently request lectures, discussions, and the opportunity to interact with bereft

persons who have experienced a sudden death notification. Small groups, field trips, and panel discussions can also meet the goals of death education courses (Block, 1976).

When teaching health care groups, a seminar based on interviews with dying patients was found to be an effective teaching methodology (Dietrich, 1980). However, other researchers suggest that the more effective teaching strategies include panels, self-assessments, and small group discussions. These teaching methods are not used by most EMS educators (Smith and Walz, 1995) suggesting that the methodologies used to teach EMTs and paramedics death and dying are not the most effective strategies.

With this limited literature base, EMS educators have not agreed upon the best method to teach EMS professionals about death and dying issues (Smith and Walz, 1995). Death educators will need new teaching methods and strategies. This literature review and Chapter 8, Teaching Strategies and Methods, in *Instructional Methods in Emergency Services* (McClincy, 1995) provided the basis for the selection of the methodologies used in the EDECT^{sm} program. Informal qualitative questionnaires from previous course offerings further refined these teaching methods into the current program (see Table 4). Since researchers have not concluded which teaching methodology is best for EMS courses, researchers can make positive contributions by testing any one of these methods. Several of these were incorporated into both programs used in this study.

Course Time Frame

The two most common, and efficient, educational formats for death and dying course for EMS providers are seminars (including workshops) and short CME sessions. Educators find the seminar format successful to teach death education courses (Caty and

Tamyln, 1984; Cohen, Shapiro, and Rosner, 1988; Harnett, 1973; Laube, 1977). This 2

day seminar format appears in many EMS educational offerings, i.e. Critical Incident

Stress Debriefing, Advanced Cardiac Life Support, and Pediatric Life Support.

Furthermore, courses of this period can effectively teach paramedics and EMTs

about behavioral emergencies (Bassuk et al., 1983). The researchers conducted the study

using a convenience sample with no comparison group, and they have not validated or

replicated their study. Therefore, the results must be interpreted cautiously. In a

controlled trial using a comparison group, Mitchell (1983a) also taught paramedics about

stress management using a 2 day workshop and found reductions in stress scores.

However, this study was not validated with other supportive or comparison studies.

Wager (1993) suggested that initial training programs on death and dying take place in a

workshop setting over a 1 to 2 day period, and thatshort review sessions follow these

programs to enhance the learning process but the author did not test these

recommendations.

Researchers have also conducted death education courses in seminar format to

teach health care professionals. In the only study using EMS professionals as

participants, a seminar format enabled students to change their attitudes and behaviors by

practicing skills during role-playing exercises (Bassuk et al, 1983). These changes may

help EMS professionals to provide the most effective care to acutely distressed patients

and their families.

The short CME session provides another effective teaching format (Mitchell,

1983a). Cowles and Swain (1984) supported the use of a 1 hour lecture and discussion

(CME class) on death and dying to teach health professionals; however, they never

provided an evaluation of their program. The authors preferred teaching a longer experiential workshop, but suggested that a 1 or 2 hour CME session could be effective if students receive reading materials prior to class.

Other studies support the use of a short course. For example, a 4 hour seminar detailing the death notification process helped those who make death notifications on a frequent basis (Tolle, et al., 1989). The results from this study need to be interpreted with caution as the researchers used a convenience sample and a survey at the end of program as an evaluation tool. A 2 hour experiential seminar changed physician's attitudes related to death (Schmidt et al., 1992). However, the evaluation was based on qualitative feedback from a survey not a controlled trial. Had these researchers evaluated their programs in methodologically sound studies, it would have increased the contributions of their work. Moreover, research supports the need for the evaluation of a short CME course in an empirically sound study.

Hoge and Hirschman (1984) showed that brief training programs (two 4 hour sessions) were effective to teach psychological interventions to EMTs. They developed, implemented, and evaluated their program. They designed brief programs to compete with the many clinical topics needed by EMTs. Their program provided little value to this research as their program contained no death-related curricula; it contains psychosocial information not related to death. However, the study did provide support for teaching EMTs non-clinical education using short educational sessions. A study using death-related topics as the focus of the curriculum would help identify whether brief training programs effectively teach death and dying to EMS professionals. .

Other researchers have examined the effect of brief units of death education. Rublee and Yarber (1983), in a three group experimentaldesign , examined the effect of three, six, and nine sessions and found that attitudes changed the most in the nine session class. Again, this study provided a measure of death attitudes on one scale, a limitation in the design and usefulness of the data. However, the researchers concluded that nine sessions were more effective than three or six sessions.

Traditional semester-long courses do not lend themselves to the unique characteristics of the EMS profession. Many EMS providers work rotating shifts, and a course offered over a long period would not fit into their work schedule. Nor do, these courses provide skills that can be immediately be used in their jobs, or provide action, both of which are personality traits of EMS professionals (Mitchell and Bray, 1990). Thus, shorter formats blend well with the EMS personality as well as their employers. Because of this, most EMS educators provide short, up to 4 hour, training sessions.

In addition to course length, decisions about course format must be made. It remains unclear whether these death and dying topics should be taught in a didactic or experiential format. In an effort to help clarify this issue, the EDECT[sm] course devotes one entire unit to the death notification process in an experiential format; whereas, the 2 hour CME course provides as didactic format to teach these topics. However, the difference in program length between these two programs limits the determination of which teaching method is most effective.

In addition to determining course length, program planners need to determine if the didactic or the experiential format is more effective in helping EMS providers make death notification, assist families, and reduce the stress inherent in making death

notifications. Some studies cite no significant differences between experiential and didactic course formats. For example, Hutchison and Scherman (1992), in a controlled trial using a comparison group, found no significant difference between didactic and experiential formats in nursing students on posttests and follow-up measures. Both groups benefited from the instruction with no significant differences between the groups. Other studies suggest that experiential courses provide better results than didactic courses in health care professionals (Durlack, 1979; Swain and Cowles, 1982; Vargo and Bastel, 1984).

Overall, the literature supports experiential programs for health care professionals. Thus, the initial idea for course format for the EDECT[sm] program was an experiential program. Despite this knowledge, the personality of EMS providers and their familiarity with the didactic format factored into the decision to start the EDECT[sm] course with a didactic approach. It was thought that EMS providers would be more receptive to the program if it started in a format familiar to their other course offerings. As the EDECT[sm] program progresses, the curriculum becomes more experiential as the literature suggests. Initially, the change from didactic to experiential occurred well into the program, but now occurs earlier in the course. This change emerged from responses to qualitative data in the pilot testing process.

From this review and knowledge of the unique personality characteristics and needs of EMS providers, the logical formats to evaluate in this research effort are (1) a 2 day, 16 hour experiential workshop; and, (2), a 2 hour didactic CME session. These common types of course formats predominate in offerings for EMS providers. These two types of programs served as the independent intervention levels. One of the important

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considerations in the evaluation was to examine if a 2 hour course was effective or if a longer course was needed to change an EMTs behavioral intentions at the scene of a death. The second consideration was the effectiveness of the experiential and didactic teaching methodologies.

Curriculum Development of Programs

The primary goal of both the EDECT[sm] seminar and the 2 hour CME session centers around EMS providers acquiring new skills to use when making death notifications and interacting with bereaved families during the death process. The EDECT[sm] curriculum, developed in 1996 and published in 1999 (Smith, et al., 1999), follows the guidelines from Corr's (1978) model for death education courses and Moskop, Mitchell, and Ray's (1990) ethics curriculum for emergency medicine residents. By transforming Unit 6 of the EDECT[sm] curriculum into a lecture-type presentation with a question and answer period, a 2 hour CME program emerged. The 2 hour CME session provides a lecture-oriented session, enhanced with a computer presentation, and solely addresses the process of making a death notification. It is taught as a didactic program with little or no experiential component.

The 2 hour program starts with a short introduction of the trends in prehospital death and the ramifications of death notifications. The majority of the 2 hours is spent on presented with 4 step death notification process and how to manage the postmortem activities. Time permitting, a video of several death notifications is presented, and the group evaluates the notifications based on the 4-step process. The last 15 minutes is reserved for a questions and clarification period.

The EDECT[sm] program uses a variety of teaching methods including lectures, small group discussions, videotape reviews, role-plays, case studies, panels, self-assessments, and scenarios during the 2 days (see table 4). During the 2 day, 16 hour workshop, many experiential techniques provide an optimal learning environment for the participants. For example, students create scenario depicting a difficult death notification. They exchange these scenarios with other students and then role-play the death notification. A debriefing follows each role-play event. A more thorough explanation of the components of the EDECT[sm] program can be found in Appendix A. Appendix B provides a brief explanation of both programs. Details of course instruction and the lecture outline are omitted from this document purposefully, as it is hoped that they will be published in a future work.

Because it is unclear whether didactic courses (e.g. 2 hour CME session), or experiential courses (e.g. EDECT[sm]), or both are effective, the educational methodologies were also examined as indicator of course success. If these courses are effective, a follow-up study will need to look at contributions of course length and teaching methodology to ascertain their impact on course effectiveness and reveal the contributions of each variable.

Content of Death Education Courses for EMS providers

After a review of the literature, limited information was gleaned about the content of death education courses for health care professionals. Even more sparse was information about the content of death education courses for EMS providers. In a related profession to EMS providers, Swisher et al. (1993) examined the topics that physicians

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discuss with families during a death notification. This retrospective study , based on

interviews with families, helped define topics important to bereaved families. The

authors suggested using these topics for death education courses. Families view the most

important discussions as (1) the cause of death, (2) the clinical course, and (3) the

viewing of the body (Swisher et al.). The authors also suggested that the following topics

be included as mandatory components of a death education course for those professionals

who make sudden death notifications: (1) improving communication skills, (2) handling

emotional issues, and (3) meeting the families (Swisher et al.). Soreff (1979) outlined the

parts of comprehensive death notification and suggested that educators include these

topics when teaching to professionals who make death notifications.

Several authors suggest that professionals who make sudden and unexpected

death notifications receive special training to learn techniques for making these forced

notifications. For example, several experts suggest using the words death, died, or dead

instead of the more popular euphemisms such as passed-on or expired (Iserson, 2000;

Leash 1994). In a sudden death, denial is common among family members, and the use

of these words helps lessen the denial. The EDECT[sm] course imparts this information

along with other unique features of death notifications in the field and describes the best

way to help families through the death of a love one. It is hoped that this will also reduce

the stressful impact to the EMTs.

A death education course should also increase the ability to make a death

notification as well as decrease the stress associated with it (Swisher et al. 1993).

Swisher et al. examined the stressful parts of a death notification and found the responses

of anger and hysteria, the unknown cause of death, and the need to make requests for

organ donation and autopsies as the most stressful. Ullman (1997) identified the most stressful task as the actual notification. Additionally, educators should be sensitive to the stressful effects on EMS providers and include strategies to cope with these stressors during their courses (Bunce and West, 1994). The EDECT^{sm} course covers all of these areas along with several other germane topics related to stress management (see appendix A).

Student's Backgrounds in Death Education Courses

In general, most thanatology experts believe that educators who enrolled students from multiple disciplines in their death education courses facilitated more pronounced changes than educators who enrolled students from only one discipline into their course (Crase, 1989). Courses structured and administered to a variety of providers promote teamwork and led to a comprehensive approach needed by families after a death notification (Soreff, 1979). This comprehensive approach increases a provider's sensitivity to the family's needs. The structure of the EDECT^{sm} course is comprehensive and appropriate for all types of EMS providers (e.g., physicians, nurses, paramedics, and EMTs) and other professionals who work in the prehospital environment (e.g. clergy and police officers). The EDECT^{sm} course provides an opportunity for students of different disciplines to enroll. However, for reasons previously cited (see chapter 1) this research effort evaluated the course using only EMTs.

Death Education Faculty

The faculty who teaches death education in most EMS programs are paramedics themselves. Since paramedics have very limited education in death and dying (Smith and Walz, 1995), these instructors may be undereducated and ineffective; however, no research exists on the effectiveness of these instructors to support this conclusion. Despite this, courses will be more successful when the faculty is trained on how best to teach about death and dying issues (Caty, Downe-Wamboldt, Tamyln. 1982). Thus, it is of great importance to evaluate the effectiveness of death education courses taught by paramedic instructors, as well as, non-paramedic instructors. It is recommended that teachers have experience in working with dying patients and bereaved persons and be knowledge about the needs of EMS students (Smith and Walz, 1995). Few instructors with skills in both areas exist. The lack of qualified instructors created the primary reason for the course developer to administer the interventions in this study. The author was trained in both areas. There are no other certified death educators who specialize in death education courses for EMS providers (R. Kastenbaum, personal communication, April 2001).

Course Evaluation

Crase (1978) was among the first researchers to stress the importance of evaluating death education courses. In the 1970s, new death education courses emerged rapidly but few educators evaluated their programs (Niemeyer, 1994). When they did evaluations, they made methodological flaws that limited the interpretation of the results and reduced the ability to generalize the results to other groups. In 1979, Simpson noted the lack of research and called for a new emphasis on empirically sound studies

evaluating the effects of death education courses. To date, there are no published formal evaluations of death education courses using paramedics or EMTs as participants (Coleman conducted a study using EMT trainees as participants as previously discussed). Therefore, this research effort builds on the existing research, or more appropriately, it starts research in this area by evaluating death education courses for EMTs.

Kurlychek (1979) provided an overview of the methods that researchers should use to evaluate death education courses and suggested that they might serve to evaluate participants from different backgrounds on multiple measures. Most instruments selected to measure attitudes (e.g., direct questionnaires, projection tests, rating scales, in-depth interviews, and psychophysical measures such as GSR and word association). Of these, the most widely used are self-report scales and the direct questionnaire. It has now become acceptable to evaluate the effects of death education courses using these types of scales (Linn, Linn and Stein, 1983).

Although not very objective and difficult to replicate, researchers measured changes in health care providers by observing the comfort level of subjects during interactions with bereaved persons in a clinical setting (Dietrich, 1980). In the EMS profession, this would require observing paramedics and EMTs on sudden death scenes while making a death notification, a practical impossibility. Therefore, the more traditional paper and pencil self-report formats provide the most effective measurement tool in this sample.

When evaluating professionals who work with the dying, the evaluation should tap multiple outcomes (Linn, et al., 1983). Educators must not accept evaluation measures in just one area (e.g., death anxiety or death knowledge). They must evaluate

their programs based on objectives from multiple areas stemming from the goals of the course. Furthermore, researchers should use theory to guide the evaluation process. This research effort aims to meet all these goals.

Theoretical Considerations of the Evaluation

Researchers should select and use theory to guide the evaluation process. Not only do educators need to know that their programs are successful, but they should seek to know why their programs are successful (or unsuccessful). Theories help guide this process. By knowing what predicts or precedes the behavioral change, educators and researchers can used these concepts in course development. These determinants of death-related behaviors can be identified using accepted and validated theories of human behavior. Using a theory in the evaluation process, also leads to an increased usability and testability of a program. Educators can replicate and refine programs when teaching EMS professionals about death and dying.

The evaluation of EDECT[sm] program and the 2 hour CME session required a theory that measured behavior and the influences of personal evaluations, attitudes, perceived social pressure, and self-efficacy, on that behavior. The Theory of Planned Behavior encompasses all of these areas (Ajzen, 1985); and therefore, seemed an ideal selection. Additionally, it performs well in health behavior research and in different samples (Ingram, Cope, Harju, Wuensch, 2000). Therefore, it was selected as the evaluation tool for the current study.

The Theory of Planned Behavior

The Theory of Planned Behavior (TPB) is one of the more widely used models to predict human behavior and one of the few to examine behavioral intent (Madden, Ellen, and Ajzen, 1992). The TPB examines the motivating factors that lead to a behavior. According to this theory, personal evaluations, perceived behavioral control, and perceived social pressure precede behavioral intent, and behavioral intent precedes the behavior (see Figure 1). Based on evaluations with the Theory of Planned Behavior, researchers effectively assessed behaviors in family planning, weight loss, breast self-examination, exercise, immunization, and career application choice (Goodin, Valios, Lepage, 1993; Ingram, Cope, and Wuensch, 2000; Madden, Ellen, and Ajzen, 1992; Young, Lierman, Gail Powell-Cope, Kasprzyk, and Benoliel, 1991). Researchers found that an educational unit and subsequent reinforcement could change health behavior (Young et al., 1991). The applicability of the TPB in a variety of settings and samples and its use in an educational program further support its use in evaluating the EDECT[sm] program and 2 hour CME program in this study. Furthermore, the instrument development process is theory driven and called for guided interviews and pilot testing within the target population. This enhanced the content validity of the measurement process and subsequent prediction of behavior.

Summary

Most people want to die at home; however, 73% die in hospitals or nursing homes (NCHS, 1999). Currently, a reversal of these trends is occurring; more people are going home to die. In the past, 80% died in hospitals and nursing homes (Kalish and Reynolds,

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1976; NCHS, 1994; NCHS, 1999). More patients returning home to die increased exposure to death and grieving families for EMS providers. Recently, EMS protocols changed, placing the EMTs and paramedics at the scene of death more often. These two changes increased the EMS provider's role in the death process, e.g. making death notifications and supporting the bereaved.

The lack of death education courses for emergency providers may be a source of the inappropriate actions by EMTs and paramedics at the scene of a death. This causes additional trauma to bereft persons and to the emergency responders. It may also contribute to the occupational stress of EMS providers and the pathological grief reactions of survivors. Benefits from a death education course include: (1), "improving the style and quality of living and dying" (2), "primary prevention or preventive health education" by "preparing individuals and societies for subsequent events and consequences" (3), "intervene by helping someone who is facing death or grief," and (4), "postventive in that it can help individuals understand death-related crisis and learn from the experience of death" (Leviton, 1977).

EMTs and paramedics may provide the only source of support on-scene to bereaved persons and may serve as a connection to the vast resources available to survivors from other members of the health care team. In hospitals, there are chaplains, social workers, nurses, victim advocates, etc. Families who experience the death of a loved one outside the hospital often do not have these resources at their disposal. Therefore, EMTs must provide emotional support to bereaved persons after a death notification and provide a link between bereaved families and these resources.

This literature review helped define the best method to teach EMTs about the principles and techniques of providing the needed emotional support to bereaved families. The following are rational for this research study (1) EMTs and paramedics need courses to teach them how to make death notifications and interact with bereft families; (2), these courses can provide a solution to this training deficit; (3) the courses stem from principles and practices found in the literature review thus have a reasonable chance of being successful; and (4), an established theory guides the evaluation process.

CHAPTER III - STUDY DESIGN AND METHODOLOGY

Overview of Chapter

This study evaluated two death and dying programs, the EDECT[sm] program and a 2 hour CME session, using a quasi-experimental design with EMTs as subjects. This chapter provides an overview of the research design, methods, sample size considerations, and procedures including selection of the participants. It concludes with an overview of the data analysis.

Research Design

This study incorporates a quasi-experimental pretest-posttest comparison design using three-groups, two experimental groups and a control group. This design is one of the more common designs used in health care research (Cook and Campbell, 1979). Because a control group could not be formed by random assignment, this design was the best design that did not require random sampling. Controlled trials, such as this, offer an effective evaluation design for educational programs (Pain et al., 1994).

Figure 2 -Evaluation Design
Quasi Experimental Pretest-Posttest Design using a Non-Equivalent Control Group

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O     X1    O
O     X2    O
O           O
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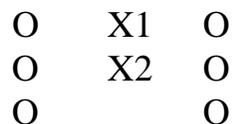
The basic experimental design, a pretest-posttest control group design, "results in interpretable and supportive evidence of program effectiveness, but cannot control all the factors affecting the validity" (McKenzie and Smelzter, 1997, pg. 244). Threats to the validity were carefully examined. For example, department administrators were interviewed to assure that no death related calls or personal deaths occurred in the participants during the experimental period. Administrators also assured that the groups had no contact with each other. Pilot testing showed that pretesting was not a significant concern. It appears that any threats to internal validity from these factors impacted the results little, if any.

Sample size

To determine the sample size, the power, the Type I error rate, and the effect size of similar studies was determined. For this study, power was set at .80 (1-b, where beta was .20) and the alpha level was set at .05. These are commonly used parameters in social science studies (Saravela and McDermott, 1993). The effect size was determined through an analysis of the literature. Cohen (1977) reviewed effect sizes in meta-analysis of behavioral science studies. He noted that behavioral science courses have smaller effect sizes and posed 1, 4, and 9, as small, moderate, and large effect sizes respectively. Two studies in the literature provide a meta-analysis of death education programs with an overall effect size of 0.287 (Maglio and Robinson, 1994; Durlack and Riesenburg, 1991). However, none of the participants in the meta-analysis were EMS professionals; and therefore, may not be applicable to the sample in this study. However, this number is the only number available. Therefore, it was used as a guide for the sample size estimate.

Using an overall effect size of 0.287, an alpha level of .05, and power of .80, a sample size of 72 is required (Munro, 2001). However, the effect size remains largely unknown; therefore, a sample of 120 was recruited. This allowed a margin for no shows, attrition, and discrepancies in the effect size. Each of the six agencies was asked to provide 20 participants. The agencies that provided the students for the EDECT[sm] group provided 12 each, and the agencies in the control group and 2 hour CME session provided 15 each. One student in the EDECT[sm] group missed the second day and the posttest. This participant's data was excluded; thus, a final sample of 83 was used. The EDECT[sm] group (n=24) was the smallest of the three groups and the group with the most no shows.

Sample

EMS professionals encounter death on a regular basis; therefore, they were chosen as participants for this initial study. Although the ideal study sample would have comprised a random sample from all paramedics and EMTs in the nation, testing this sample becomes economically and logistically challenging. Reducing the sample to all EMS providers in one State still poses problems. Scheduling courses within a reasonable distance to the providers' homes or places of employment would be very unlikely. Scheduling of classes would be problematic since most EMS providers work rotating schedules. For these reasons, EMS agencies and fire departments were contacted for their help in soliciting participants to take the course while at work. EMS providers would be assigned to the training program as part of their shift.

Initially, the study was designed to include paramedics only; EMTs were excluded. In the initial phases of the study, when organizations were solicited for

participation in the study, the CME requirements for paramedics were less rigorous than today. Changes in paramedic CME requirements caused the participating organizations to withdraw from the study. New paramedic agencies were recruited for the study, both in state and out-of-state, but there was little interest. Individual paramedics were recruited, also with minimal success. Changes in CME requirements caused paramedics to take only the mandatory courses; the courses needed for recertification that fall into core areas such as cardiology or trauma. Death and dying courses no longer counted for this mandatory area of the CME requirements. There is a section of the CME credits that these courses apply, however, most paramedics acquire these credits in the course of their daily jobs.

The lack of ability to recruit participants was not surprising. This type of education is underemphasized and undervalued by EMS educators and EMS providers. Some EMS providers feel they do not need education in death-related areas. Many more are reluctant to take courses in this area. EMS providers often become uncomfortable when talking about death-related subjects. These attitudes and reluctant behaviors, coupled with stricter CME requirements, made recruitment of a large-number of paramedics impossible. The efforts to recruit an adequate number of subjects had to be expanded.

The pool of EMTs is much larger than the pool of paramedics. Therefore, the recruiting efforts were expanded to include EMTs. Again, marketing was conducted in state and out-of-state. A large group of EMTs from several (6) EMS agencies in rural Wisconsin agreed to participate in the study. Each agency agreed to provide 20 EMTs.

The final study sample consisted of 83 EMTs all who worked clinically providing prehospital care in Wisconsin. All EMTs had National Registry of EMTs certification. A few EMTs in each department performed administrative duties or collected the evaluation measures; thus, they were not included in the study sample. Some assisted in the administration and collection of the evaluation instruments to help reduce bias in the evaluation process.

All EMTs worked and/or volunteered in a rural area of Wisconsin. All EMTs were white. There were 48 males and 35 females. They averaged 32.9 years in age, approximately half (42%) were single and half (52%) were married (6 % divorced or widowed). They ranged from less than 1 to 33 years of EMS service with an average of 5.3. They averaged 46.8 calls per month. Further information about characteristics of the sample can be found in chapter 4.

Procedure

Before implementation of the intervention, the investigator contacted administrators from the EMS agencies to assure acceptance and support. Administrators' cooperation was solicited with the understanding that commitment of their resources would help evaluate the program effectiveness and begin to develop death-related educational programs for EMTs and paramedics nationwide. The importance of contacting and gaining support of the key administrators increased the overall success of the study. After completion of this project, a copy of the results along with interpretations of the findings will be discussed with the administrators. These discussions are planned for October 2004.

Ethical and privacy standards were adhered to including approval by the University of Maryland College Park Institutional Review Board (IRB) of the use of human participants. The questionnaires were anonymous and confidential. To adhere to privacy and confidentiality standards, each participant created an identification number and used it throughout the research project. Other than at the time of inclusion into the study, no identifying information such as name, address, telephone number was asked of the participants. After completion of the study, all data will be destroyed. The investigator plans to debrief all participants at the conclusion of the study after measuring their behaviors in March 2004.

Initially, a letter or e-mail was sent to all EMTs asking them to participate in a new educational program (see appendix F). Letter and e-mails were also sent to the administrators and training officers of EMS agencies. To encourage participation, EMS agencies and fire department administrators were sent a letter of support for the study followed by a telephone call. It was hoped that social influence would increase the number of participants.

After sufficient responses to the recruitment letters, six EMS agencies were randomly assigned to one of three groups. Two agencies participated in the 2 day death education workshop based on the *Emergency Death Education and Crisis Training*[sm] (*EDECT*[sm]) curriculum. Two agencies participated in the 2 hour CME session. The other two groups served as control groups. The control groups received alternative education. One group received a 2 hour lecture on advanced airway techniques and the other group received a 2 hour lecture on toxicology. Neither of these lectures contained death-related education.

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A volunteer sample provided the most appropriate sampling frame. Students enrolling in future course offerings will do so voluntarily. The type of CME that an EMT completes remains a personal decision; CPR is the only mandatory course. Therefore, to require EMTs to take this course would not be a true reflection of the actual population enrolling in future courses. A volunteer sample reflects the actual population that would enroll in the future. Therefore, they were used for this study, as an EMT who might be forced to take this training is not the same as a student who willingly volunteers to take the course.

A letter was sent to EMTs in the intervention groups detailing instructions, dates, and times for the educational sessions. The control groups were surveyed when they were attending the non-death related lecture described above. All participants received the questionnaire prior to the intervention and at the end of the intervention. To help reduce any bias from the principal investigator serving as the primary researcher, administrators from the EMS agencies helped administer and collect the data. Before the data was collected, both pretest and posttest, participants were assured of anonymity. This additional assurance may have encouraged open and honest responses.

EMTs received CME credits after completion of the training program. To encourage participation, the EMTs who were assigned to the 2 day program received $50 in cash. Despite this, some students did not show up for the EDECT^{sm} (2 day) program. Participants in the control group will be offered the program in October of 2004. Using a wait list design eliminated the discriminating effects to the control group. With the wait list design, the control group will have the opportunity to attend the 2 hour CME session

in October 2004. This will enable al participants an opportunity to attend the

interventions and will eliminate any discriminating effects to the control group.

Variables

1. Control variable: All participants were nationally registered Emergency Medical
   Technicians licensed by the State of Wisconsin to provide EMT-Basic care in
   Wisconsin. All participants were functioning with an EMS agency at the time of
   program administration.

2. Confounding variables: The descriptive data obtained on the demographic
   questionnaire was analyzed for the presence of confounding variables. These
   variables were controlled for in the data analysis using covariate procedures.

3. Independent Variable: In the first six hypotheses, there was one independent
   variable with two levels: the treatment group (both EDECT^{sm} and 2 hour CME
   groups) and the control group. For the seventh hypothesis, there was also one
   independent variable with two levels: the EDECT^{sm} program and the 2 hour CME
   session.

4. Dependent Variables: There are seven dependent variables. The first six are (1)
   an EMTs intent to use the words "death", "died" or "dead", (2) intent to use of
   successive preannouncements, (3) intent to leave follow-up information with
   families, (4) intent to allow families to view the deceased, (5) intent to use the
   four step death notification process, and (6) intent to assist in the management of
   grief. These dependent measures arose from the goals of the EDECT^{sm} program
   and the 2 hour CME session. The dependent variable for the seventh hypothesis

was the score on the behavior intent scale. This scale is described when the findings for hypothesis seven are presented.

Each of these was measured on a five-point scale as suggested by Ajzen and Fishbein (1980). These items are the first six questions on the questionnaire (see Appendix H). A score of 1 is equal to "*strongly agree*," a score of 2 "*agree*," a score of 3 u*nsure*," a score of 4 "*disagree*," and a score of 5 "*strongly disagree*."

It is important not to use a single measure such as death anxiety to measure the outcome of the study (Maglio and Robinson, 1994; Papadatou, 1997). Furthermore, individual behaviors maintain less consistency than behavioral categories (Madden, Ellen, and Ajzen, 1992). For these two reasons, multiple individual behaviors, within the larger category of death-related behaviors were used for the first six dependent variables.

Demographic Questionnaire

The demographic questionnaire included items on gender, race/ethnicity, age, martial status, educational level, years of experience, and income level (see appendix G). Researchers commonly measure these as control variables in other death education research (Niemeyer, 1994). More specific to the EMS occupation, the questionnaire asked if the participant had a recent (within the last 6 months) critical incident. A critical incident refers to a response involving a death that evokes a heightened emotional response to the incident, more than other death-related calls. EMTs who might still be processing a critical incident might suffer a psychological insult from an experiential course on death and dying. Unreliable data sources support this. However, since a potential risk exists, any paramedic reporting a recent critical incident was asked if they

wanted to be excused from the study. None chose to excuse themselves. Those who

marked "yes" and chose to stay in the study had their data analyzed for pretest

differences. The data on these few EMTs (n=4) was not significantly different from the

group data; therefore, the data was left in the data pool for the final analysis.

Additionally, the questionnaire included information on number of calls handled

per month, call per month involving a death, previous training in death and dying, and

previous experience with making death notifications. These were included to determine

if any group handled more death related calls than any other group. For example, if one

group had a large number of nursing homes in this area or a large elderly population they

would have handled death more frequently than those EMTs who provided services in a

jurisdiction with less elderly people. The results from this data are presented in chapter 4.

Evaluation Instrument

Locating valid and reliable instruments to measure death-related behaviors was

difficult. No instruments were available to measure death related behavior in EMTs; and

therefore, an instrument was created. A self-report scale was selected for the following

advantages: (1) they do not require trained personnel to administer, (2) they take a short

time for the subjects to complete, (3) they are easy score, (4) they provide objective data,

(5) they can be used to document changes over time, (6) they are inexpensive, and they

provide information that only the subjects can provide (Zung and Cavenar, 1980).

It also has several disadvantages. Responses are dependent on the subject's

ability to remember and report answers honestly. There may be a social desirability on

the part of the subject to answer in a manner pleasing to the evaluator. These drawbacks

are of importance and should be considered when interpreting the results of this study. Despite these disadvantages, a self-report scale was the best choice of evaluation instrument to use in this research effort.

The study employed one evaluation instrument. The evaluation instrument was created using the methodology suggested by Ajzen (1985) and Ajzen and Fishbein (1980). Several target behaviors within the larger category of death-related behaviors were identified from goals of the program. These were used to create the items on the questionnaire.

Then, EMS providers from the local area (Harford and Carroll County, Maryland) were solicited for the salient behavioral, normative, and perceived control beliefs to each of these behaviors. This data lead to the creation of questions for behavioral intent, attitudes toward the behavior, subjective norm, and perceived behavioral control (see Appendix H). Additionally, the instrument was reviewed by the researcher and other EMS educators for content and face validity.

The scale consists of thirty-seven items assessing the components of the Theory of Planned Behavior. The first six items on the survey represent the behavioral intent of each corresponding behavior. The remaining items represent sets of questions on attitude, perceived behavioral control, and social norms. Several filler items placed intermittently during the scale served to counter response bias. Other researchers found that similar items presented together in response sets could cause respondents to perceive that they have already answered the question and would answer in a like manner for both questions (Young et al., 1991). Thus, several questions about EMTs attitudes towards

death on-scene were placed to break up the response sets. These questions are 15, 18, 29, 32, and 35. The results of these questions are presented in chapter 4.

After IRB approval of the study, the instrument was piloted with 35 EMTs and paramedics. In order to test the internal reliability, Cronbach alpha internal consistency reliability coefficients were calculated. All of the subscales had a reliability coefficient of .69 or higher (see Table 5). Most authors suggest that a reliability coefficient of .70 is acceptable (Burns and Grove, 2001, Munro 2001).

Table 5 – Internal Reliability Analyses of Subscales		
Subscale	Number of Items	Alpha
Attitude	6	.69
Subjective Norm	6	.74
Perceived Behavioral Control	14	.83
Behavioral Intention	6	.78

In the pilot-testing process, an examination of the instrument's stability was measured using a Pearson's product moment correlation. Table 6 provides the results of test-retest stability reliability analyses of the subscales. The test-retest showed the instrument to be stable in EMT and Paramedics (see Table 6).

All the subscales appeared to be stable over time showing relatively high correlation coefficients (.73-.82). Finally, an item analysis correlation for the entire instrument and each subscale was performed, and it was found that the instrument had acceptable internal consistency (Cronbach alpha .94).

Table 6 – Stability Reliability Analysis Subscales		
Scale	Number of Items	Correlation Coefficients
Attitude	6	.76**
Subjective Norm	6	.73**
Perceived Behavioral Control	14	.80**
Behavioral Intent	6	.82**

**significant at the 0.01 level

Statistical Analysis of the Data

All data was coded and entered into the SPSS (v11.5) statistical package by the author. The descriptive data was examined first using univariate analysis (e.g., measures of central tendency). Between group analysis was conducted using the appropriate statistical tests. For example, chi square (Kruskal-Wallis) analysis was used for the discrete variables such as gender and martial status. After consulting with a statistician, the congruent variables such as, age and income were recoded into discrete variables (see Chapter 4). The statistically significant differences between the groups were controlled for analysis as covariates.

The analysis then proceeded with an examination of the hypotheses using inferential statistics. During the analysis phase, strict attention to the number of tests employed reduced the incidence of Type I errors. The use of multivariate procedures also

helped reduce the incidence of Type I errors. The following section lists the hypotheses, variables, and procedures used to test each hypothesis.

1. **EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to use the words "death," "died," or "dead" when making a death notification more often than those EMTs receiving no intervention.**

The independent variable, training program, is a nominal variable and the dependent variable, using the death words, is ordinal. When comparing two groups on an ordinal variable, it is appropriate to use an ANOVA or t-test if the variable is continuous and meets the assumptions for parametric tests. The dependent variable in this hypothesis did not meet these assumptions (Munro, 2001). Therefore, to test the statistical significance of this hypothesis, the Mann-Whitney U test was used. This test is the nonparametric equivalent of an ANOVA test. However, for ease in reading this report, the term ANOVA or ANCOVA is used throughout the rest of this report. The analysis of hypothesis one explored the relationship between the two groups and intent to use these death-related words.

2. **EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to use successive preannouncements more often than those EMTs receiving no intervention.**

The independent variable (training program), is a nominal variable, and the dependent variable (using successive preannouncements) is an ordinal variable with five levels. To test the statistical significance of this hypothesis an ANOVA test was employed. This

analysis explored the relationship between the two groups and intention of EMTs to use successive preannouncements.

3. **EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to leave follow-up information for families more often than those EMTs receiving no intervention.**

To test the significance of this hypothesis, an ANOVA was used. The independent variable (training program) has two levels, the training group and the control group. The dependent variable (likeliness to leave follow-up information with families) is an ordinal variable. The analysis explored the relationship between the two groups and the intention of EMTs to leave follow-up information with families after a death notification.

4. **EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to allow families to view the deceased (on non-crime scenes) more often than those EMTs receiving no intervention.**

Like the other hypothesis, the non-parametric equivalent of the ANOVA was used to test the significance of the relationship. The independent variable (training program) has the same two levels, the training groups and the control group. The dependent variable (likeliness to allow families to view the body) is an ordinal variable with five levels. The analysis explored the relationship between the two groups and the likelihood of allowing families to view the deceased body.

5. **EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to use the four step process during a death notification more often than those EMTs receiving no intervention.**

To test the significance of this hypothesis, the non-parametric equivalent of the ANCOVA test was used. The independent variable has the same two levels. The dependent variable (intent to use the 4 step death notification process) is an ordinal variable. The analysis explored the relationship between the two groups and the intent to use this process.

6. **EMTs who complete the EDECT^{sm} program or the 2 hour CME session will intend to assist families in managing their grief more often than those EMTs receiving no intervention.**

To test the significance of this hypothesis, a non-parametric ANCOVA was used. The independent variable (training program) has two levels. The dependent variable (likeliness to help families manage their grief) is an ordinal variable. The analysis explored the relationship between the two groups and the intent to assist families with their grief.

7. **EMTs who complete the EDECT^{sm} program will change their behavioral intention of on-scene death-related behaviors more often than those EMTs receiving the 2 hour CME session.**

To test the significance of this hypothesis, an analysis of variance test was used. This analysis explored the relationship between the two experimental groups. A Mann-

Whitney test was used to explore this relationship. All data is reported in the final

analysis. The analysis of the questions is listed in Table 7.

Table 7 – Summary for the Analysis of the Questions included in the Survey	
Question	Analytical Method
Do EMTs think that an EMT can affect the grief/recovery of a family?	Analysis of Covariance (ANCOVA)
Do EMTs think that their role as an EMT includes making a death notification?	Analysis of Covariance (ANCOVA)
Do EMTs feel comfortable on-scene making a death notification	Analysis of Covariance (ANCOVA)
Do EMTs think they have had adequate preparation in making a compassionate death notification	Analysis of Covariance (ANCOVA)
Do EMTs think they have had adequate training to help the families at a time of death	Analysis of Covariance (ANCOVA)
What influence do attitudes, subjective norm, and perceived behavioral control have on behavioral intent	Multiple Regression, stepwise entry of variables.

Summary

        The proposed research effort examined two death education interventions: a 2

day, 16 hour experiential program and a 2 hour didactic CME program, both based on the

EDECT[sm] curriculum. The two programs were evaluated using a pretest-posttest design

in a volunteer sample of EMTs who work in rural Wisconsin. The Theory of Planned

Behavior was used to measure changes in behavioral intent of EMTs at the scene of a

death.

        An assessment instrument was designed, developed, administered, and pilot-

tested. After analysis, the instrument appeared to have good reliability, validity, and

stability. This instrument was then used to measure EMTs' behaviors after exposure to

an instructional unit on death and dying. Additionally, the assumptions that underlie the

changes in behavioral intent were examined. From this evaluation, the efficacy of these

programs was examined, which helped achieve the goals of this research effort -- to

evaluate the effectiveness of these two programs and to reveal the factors that lead an

EMT to change his/her behavior at the scene of a death.

CHAPTER IV- RESULTS

This chapter presents the results from two educational courses administered to Emergency Medical Technicians (EMTs). The Theory of Planned Behavior (TPB) provided the underpinning to the evaluation process. The results suggest that relationships exist among the constructs of the TPB that lead an EMT to change his/her behavioral intent and subsequent behavior at the scene of a death. These results may play an important role in the development and administration of future death-related educational programs for EMTs. The chapter includes a summary of the demographics of the sample, testing of the hypotheses, results of the questions from the survey, and testing of the theoretical model.

Demographics of Sample

Table 8 presents the descriptive information for the intervention group (EDECT^{sm} and 2 hour CME session) and control group variables. For testing of the first six hypotheses, the two intervention groups were recoded into one group, the treatment group. However, the group data is presented separately in the table to help understand the analysis of the questions. Demographic variables that were continuous were recoded to categorical variables (see chapter 3). Thus, all demographic variables were categorical; thus, the Kruskal-Wallis test was used to explore the relationship between the demographics and the groups.

Gender was significant when the three treatment groups were analyzed as separate groups. The EDECT^{sm} course had significantly more women than the other two groups

H (2, n=83) =23.286, *p*<.001. However, when the EDECT^{sm} course and the 2 hour CME

session were grouped together as one treatment group, gender became statistically non-

significant. Therefore, when the hypotheses were tested, gender was not entered as a

covariate. Some of the additional questions examined all three groups independently; in

these tests gender was entered as a covariate.

Table 8 –Demographic Variables				
Variable		Control Group (n=29)	2 Hour CME (n=30)	EDECT^{sm} (n=24)
Gender*	Male	0.72 (21)	0.77 (23)	0.17 (4)
	Female	0.28 (8)	0.23 (7)	0.83 (20)
Age*	19-24	0.41 (12)	0.23 (7)	0.25 (6)
	25-30	0.38 (11)	0.17 (5)	0.00 (0)
	31-40	0.21 (6)	0.27 (8)	0.25(6)
	41 and older	0.00 (0)	0.33 (10)	0.50 (12)
Marital Status	Single	0.45 (15)	0.33 (10)	0.42 (10)
	Married	0.52 (13)	0.60 (18)	0.50 (12)
	Other	0.03 (1)	0.7 (2)	0.08 (2)
Education*	High School	0.21 (6)	0.17 (5)	0.54 (13)
	Some College	0.59 (17)	0.54 (16)	0.33 (8)
	College Grad	0.21 (6)	0.30 (9)	0.13 (3)

*significant group differences at the p<.05 (Kruskal-Wallis Test)

Age was statistically significant (*H* (2, n=83), = 14.180, *p*<.001), the EDECT^{sm}

group was the older than the two hour group and the control group was the youngest of all

three groups. Like gender, age becomes non-significant when the two treatment groups

are collapsed into one group to test the hypotheses. Therefore, it was not entered as a

covariate during the testing of the hypotheses, but was controlled in the questions.

The EDECT^{sm} group had significantly less education (H (2, n=83) = 8.832, $p<.05$) than either of the other two groups, but this finding became non-significant when the two treatment groups were collapsed into one group. It too, was controlled as needed during the analysis of the questions. Finally, the Kruskal-Wallis test showed that marital status was not significant.

Table 9 –Occupational Variables				
Variable		Control Group (n=29)	2 Hour CME (n=30)	EDECT^{sm} (n=24)
Years in EMS	1 or less	0.17 (5)	0.20 (6)	0.25 (6)
	2 or 3	0.38 (11)	0.17 (5)	0.25 (6)
	4 to 6	0.31 (9)	0.20 (6)	0.08 (2)
	7 to 15	0.14 (4)	0.27 (8)	0.17 (4)
	16 or higher	0.00 (0)	0.17 (5)	0.25 (6)
Calls per Month*	Less than 10	0.17 (5)	0.27 (8)	0.25 (6)
	11-20	0.07 (2)	0.33 (13)	0.00 (10)
	21-49	0.10 (6)	0.23 (7)	0.08 (2)
	50 or higher	0.38 (16)	0.03 (2)	0.08 (6)
Death Calls per Month*	2 or less	0.76 (22)	1.00 (29)	0.75 (18)
	3 or more	0.24 (7)	0.00 (0)	0.25 (6)
Death Notifications Per Month	2 or less	0.86 (25)	1.00 (30)	0.91 (20)
	3 to 5	0.14 (4)	0.00 (0)	0.09 (2)
Comfort Level Making a DN	Very or Somewhat Comfortable	0.34 (10)	0. 38(11)	0.27 (6)
	Unsure	0.38 (11)	0.38 (11)	0.55 (12)
	Somewhat or Very Uncomfortable	0.28 (8)	0.24 (7)	0. 18(4)
Formal Death Education	Yes	0.14 (4)	0.03 (1)	0.00 (0)
	No	0.86 (25)	0.97 (29)	1.00 (4)

*significant group differences at the p<.05 (Kruskal-Wallis Test)

In general, the control group was the youngest, most educated, and most likely to be single. The EDECT^{sm} group was older, more likely to be female, more likely to be married, and was less educated than the other two groups. All participants were white and worked in rural areas of Wisconsin. Four participants had close relatives that had died in the past 6 months (1 stepson and 3 grandparents). Examination of their pretest scores did not differ from the group; thus, they were included in the final analysis. One-third of the participants reported that they had a critical incident in the past. Of these, only four reported that the critical incident occurred in the last six months. The data from these individuals did not differ from the group; thus, they were included in the final data set.

The occupational characteristics were examined next (see Table 9). Death notifications (DNs) per month, comfort level when making a death notification, and formal education in death and dying were all statistically non-significant amongst the groups. The participants in the 2 hour CME session ran fewer calls involving a death than the other treatment group or the control group (H (2, n=83) = 9.902, p<.05). The 2 hour CME group also ran significantly fewer calls per month than the EDECT^{sm} group or the control group (H (2, n=83) = 48.243, p<.01). The participants in 2 hour CME group lived in very rural areas, and the EMS agencies they worked for ran fewer EMS calls.

Group Outcomes

Table 10 provides descriptive summaries of the first six dependent measures for each group. The table details means, standard deviations, and pretest-posttest scores for each group. Before testing of the hypotheses, the relationship between pretest and

posttest was examined using a test of correlation for each of the six hypotheses. The relationship between pretest and posttest scores was significant (p<.001) in hypotheses two through six. The results from the testing of hypothesis one did not reach statistical significance, but pretest and posttest scores tended to correlate with each other. These results suggest that a correlation exists between pretest and posttest measures, a common problem in research. Because of this, change scores are not supported for use (Campbell and Stanley, 1966).

Table 10- Pretest-Posttest Group Means and Standard Deviations for Behavioral Intent						
Variable	Control Group (N=29)		2 Hour CME (N=30)		EDECT^{sm} (N=24)	
(Intent to…)	Pre (sd)	Post (sd)	Pre (sd)	Post (sd)	Pre (sd)	Post (sd)
Use the words dead or died	1.76 (.786)	1.69 (.761)	2.20 (1.06)	1.27 (0.64)	3.08 (1.06)	1.17 (.381)
Use Successive Preannouncements	2.86 (.581)	2.79 (.559)	2.89 (.567)	1.47 (.507)	2.82 (.588)	1.25 (.442)
Leave follow-up information	1.76 (.689)	1.83 (.805)	2.03 (.890)	1.37 (.615)	2.17 (.702)	1.50 (.659)
Allow viewing of body	2.20 (1.06)	1.72 (.702)	1.97 (.809)	1.40 (.814)	2.00 (.834)	1.17 (.381)
Use four step DN process	2.66 (.253)	2.86 (.581)	2.86 (.441)	1.63 (.669)	2.83 (.381)	1.33 (.482)
Help the family's grief	2.00 (8.86)	2.21 (.774)	2.30 (1.06)	1.47 (.860)`	1.75 (.737)	1.25 (.442)

Several statistical tests can reduce the effects of the pretest. A statistician recommended using a covariate analysis of variance. Therefore, when hypotheses two

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through six were tested, the posttest score was used for the dependent variable; the

treatment group was used for the independent variable; and the pretest scores were used

as the covariate.

Findings for Hypothesis 1

The research hypothesis was that EMTs who complete the EDECT[sm] program or

the 2 hour CME session (treatment group) will intend to use the words "death," "died," or

"dead" when making a death notification more often than those EMTs receiving no

intervention (control group). Participants that responded with a lower score intended to

use the words more often. Participants in the treatment group reported statistically better

(lower) scores than the participants in the control group. Thus, the data suggests that

EMTs who received the training were more likely to use the words death, died, or dead

when making a death notification (see Table 11).

Findings for Hypothesis 2

The research hypothesis was that EMTs who complete the EDECT[sm] program or

the 2 hour CME session (treatment group) will intend to allow families to view the body

on non-crime scenes than those EMTs receiving no intervention (control group).

Participants reported (lower scores) that they intended to allow families to view the

deceased body of a loved one after receiving either the EDECT[sm] course or the 2 hour

CME session. Results of the ANCOVA can be found in Table 11.

Table 11 - ANCOVA Table for Treatment Versus Control Groups						
Variable	Control Group (N=29)		Treatment Group (N=54)		Significance Test	
(Intend to…)	Pre (sd)	Post (sd)	Pre (sd)	Post (sd)	F	P
Use the words dead or died	1.76 (.786)	1.69 (.761)	2.59 (1.14)	1.22 (.538)	18.309*	.000*
Use Successive Preannouncements	2.86 (.581)	2.79 (.559)	2.86 (.572)	1.33 (.476)	187.123	.000*
Leave follow-up information	1.76 (.689)	1.83 (.805)	2.09 (.807)	1.43 (.633)	14.964	.000*
Allow viewing of body	2.20 (1.06)	1.72 (.702)	1.98 (.781)	1.30 (.662)	18.017	.000*
Use the 4 Step DN process	2.66 (.553)	2.86 (.581)	2.85 (.411)	1.50 (.607)	96.109	.000*
Help the family's grief	2.00 (.886)	2.21 (.774)	2.06 (.960)	1.37 (.708)	30.626	.000*

*sig. post-test differences between groups at $p<0.05$ (ANCOVA)

Findings for Hypothesis 3

The research hypothesis was those EMTs who complete the EDECT[sm] program or the 2 hour CME session (treatment group) will intend to leave follow-up information for families more often than those EMTs receiving no intervention (control group). Pretest was entered as a covariate into the model. Like the first two hypotheses, the results were significant, showing that EMTs who received the training intended to leave follow-up information more often than those EMTs that did not receive the intervention (see Table 11).

The research hypothesis was that those EMTs who complete the EDECT^{sm} program or the 2 hour CME session (treatment group) will intend to use successive preannouncements when making a death notification more often than those EMTs receiving no intervention (control group). Again, lower scores suggest that the intention to perform the behavior is more likely to occur. EMTs who received either intervention intended to use successive pre-announcements more often than the control group (see Table 11). This hypothesis showed the largest F value of all the hypotheses suggesting that this behavior will be the most likely to change given that behavioral intent precedes behavior (Ajzen, 1985).

The research hypothesis was those EMTs who complete the EDECT^{sm} program or the 2 hour CME session (treatment group) will intend to use the four step death notification process more often than those EMTs receiving no intervention (control group). Like the other hypotheses, the data support this hypothesis. EMTs trained with either the EDECT^{sm} program or the 2 hour CME course intended to use the 4 step process more often than the EMTs in the control group. The F value (see Table 11) was very large suggesting that it is very likely that EMTs who undergo the training programs will start to use the 4-step death notification process.

The research hypothesis was those EMTs who complete the EDECT[sm] program or the 2 hour CME session (treatment group) will intend to assist families in managing their grief more often than those EMTs receiving no intervention (control group). Again, the data support the hypothesis (see Table 11). After having received either intervention, EMTs intended to assist families with their grief more often than EMTs receiving no intervention.

In summary, the first six hypotheses were examined using an ANCOVA statistical procedure using pre-test as the covariate (except hypothesis one). These hypotheses were accepted, as there was insufficient evidence to reject any of the hypotheses. Table 11 provides the pretest, posttest means, ANCOVA F statistics, and the probabilities for each of the six hypotheses. The data supports that EMTs intend to change their death-related behaviors on-scene after receiving one of these educational units on death.

Behavioral Intent Scale

Finally, the overall effect of behavioral intent was examined. The behavioral intent score was obtained by combining the posttest scores of all six dependent variables in each of the hypotheses into one score. Each posttest score for the six hypotheses was totaled, averaged, and recoded as behavioral intent. The pretest was computed in a similar fashion. Reliability estimates using Cronbach alpha (.80) show the scale to be internally consistent and reliable. Next, the relationship between pretest scores and posttest scores on behavioral intent was examined. No significant correlation existed between the scores. This scale was used to test hypothesis seven.

Findings for Hypothesis 7

The research hypothesis was that EMTs who attended the EDECT^{sm} program intend to change their behavioral intentions more often than those attending the 2 hour CME session. This question was explored by comparing the EDECT^{sm} group with the 2 hour CME session group on the behavioral intent scale. The relationship between pretest behavioral intent and posttest behavioral intent was not significant; thus, pretest was not controlled for in the analysis. However, gender, age, and educational level were controlled for in the analysis as they were previously found to be statistically different between the two groups. The means between the two treatments group on the behavioral intent was not significant (t (=52) 1.04, $p = .072$). The results show a trend for those EMTs who receive the EDECT^{sm} training to intend to change their behavior more often than those EMTs who receive the 2 hour course; however, it did not reach a level of statistical significance. The precedents for this behavior are examined in question six under the section titled, other results.

Findings for Question 1

The first research question asked EMTs if they thought that an EMT could impact the grief/recovery of the family. Prior to the intervention, the EMTs in the EDECT^{sm} group were least likely to think that an EMT's actions can influence the grief and recovery process of bereaved families (see Table 12). However, after receiving the EDECT^{sm} intervention, they were the more likely to respond that an EMT's actions could affect the family's recovery than the 2 hour CMEgroup or the control group. However,

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the results were not statistically significant (F (2, 83) = 3.812 p=.162). On the posttest

scores, the EMTs in the 2 hour CME group also showed a trend to think that an EMT's

actions could affect grief, but it did not reach statistical significance either.

Table 12- Pretest-Posttest Group Means and Standard Deviations for EMTs Actions Influencing Grief/Recovery		
Treatment condition	Pre (sd)	Post (sd)
Control Group (N=29)	1.69 (.850)	2.10 (.772)
2 Hour CME (N=30)	1.97 (.765)	1.57 (.679)
EDECT^{sm} (N=24)	2.08 (.654)	1.42 (.654)

Findings for Question 2

        This research question asked if EMTs thought that their role as an EMT includes

making a death notification. The means and standard deviations in Table 13 show that

those EMTs in the treatment groups were more likely to think that a death notification

was part of their role after receiving the training. With pre-test scores entered as a

covariate, the ANCOVA show significance at the p <.001 level (F (2, 79) = 22.910).

EMTs receiving the EDECT^{sm} intervention were most likely to report that their role as an

EMT included making a death notification. The EMTs in the 2 hour CME group also

showed this change but not to the same degree as the EDECT^{sm} group.

Table 13- Pretest-Posttest Group Means and Standard Deviations for EMTs who think that their role includes DNs		
Treatment condition	Pre (sd)	Post (sd)
Control Group (N=29)	2.41 (.907)	2.55 (1.02)
2 Hour CME (N=30)	2.80 (.847)	1.93 (.740)
EDECT^{sm} (N=24)	2.58 (.881)	1.33 (.637)

Findings for Question 3

This research question asked if EMTs felt comfortable on-scene making a death notification. Table 14 shows the means and standard deviations. On the pretest, the three group means were similar. A score of three indicates a response of "unsure," a score of two indicates a response of "somewhat comfortable," and a score of one indicates "very comfortable." The EDECT^{sm} group showed the most significant change ($F(1, 79) = 19.486$, $p < .001$). They felt more comfortable making a death notification after receiving the training. The EMTs in the 2 hour CME session showed smaller positive changes.

Table 14- Pretest-Posttest Group Means and Standard Deviations for EMTs who feel comfortable making a DN		
Treatment condition	Pre (sd)	Post (sd)
Control Group (N=29)	2.38 (.820)	2.57 (.790)
2 Hour CME (N=30)	2.50 (1.009)	2.33 (.844)
EDECT^{sm} (N=24)	2.45 (.800)	1.58 (.504)

Findings for Question 4

 This research question asked if EMTs thought they have had adequate preparation

in making compassionate death notifications. The means and standard deviations are

shown in Table 15. Again, the EDECT^{sm} group showed the greatest (lower scores)

changes (F (2, 79) = 14.715, p<.001). The 2 hour CME group also showed changes but

were not as large as those EMTs in the EDECT^{sm} group. Prior to the program, the

EDECT^{sm} group was the most uncomfortable making death notifications; however, they

were the most comfortable after the training.

Table 15- Pretest-Posttest Group Means and Standard Deviations for EMTs who feel their DN training is adequate		
Treatment condition	Pre	Post
Control Group (N=29)	3.38 (.775)	3.14 (.756)
2 Hour CME (N=30)	3.30 (1.022)	2.70 (1.088)
EDECT^{sm} (N=24)	3.55 (.671)	1.83 (.565)

Findings for Question 5

This research question asked if EMTs thought they have had adequate training to help the

families at the time of a death. The means and standard deviations are shown in Table

16. At the time of the pretest, all EMTs felt that their training was inadequate. However,

at the time of the posttest, the groups were more likely to feel that their training was

adequate (F (2, 82) = 3.245, p=.044). Again, the EDECT^{sm} group showed the greatest

change in their responses. The scores ranged from "somewhat comfortable" to "very

comfortable."

Table 16- Pretest-Posttest Group Means and Standard Deviations for EMTs Who Feel Their Training To Help Families Is Adequate		
Treatment condition	Pre (sd)	Post (sd)
Control Group (N=29)	3.03 (.865)	2.97 (1.052)
2 Hour CME (N=30)	3.40 (.855)	2.30 (1.055)
EDECT^{sm} (N=24)	3.58 (.654)	1.58 (1.58)

Findings for Question 6

This question examined the influence of attitudes, subjective norm, and perceived behavioral control on behavioral intent. According to the TPB, attitudes towards a behavior, perceived control over a behavior, and what others think we should do (subjective norm) influence decisions to change a behavior (behavioral intent). Correlations of these variables are presented in Table 17. Intention to change behaviors related to death and dying correlated significantly with attitude, perceived behavioral control, and subjective norm. Attitude showed the greatest correlation with behavioral intent, while subjective norm showed the smallest correlation.

Table 17 - Correlations between variables contained in the TPB for death-related instruction of EMTs			
	Attitude	Subjective Norm	Perceived Control
Attitude			
Subjective Norm	.206*		
Perceived Control	.804***	.193*	
Intention	.923***	.256**	.769***

*** significant at p<.001; ** significant at p<.01; * significant at p<.05

A linear multiple regression was used to test the Theory of Planned Behavior's ability to explain behavioral intention in EMTs exposed to death and dying unit. This analysis tested the contribution of each variable. Each variable was entered in stepwise fashion. Attitude was entered first, followed by perceived behavioral control, and finally subjective norm. The multiple regression revealed that attitude accounted for 85 percent of the variance in behavioral intent (F (1, 82) = 464.355, p<.001). After attitude was entered, the regression coefficients for perceived behavioral control (0.2) and subjective norm (0.4) were extremely small. However, subjective norm correlates highly with behavioral intent when examined independent of attitudes. This suggests that a considerable overlap exists in the variance of behavioral intent explained by attitude and subjective norm. The combined correlations of attitude, subjective norm, and perceived behavioral control produced a multiple correlation of .926 (R^2=.858). In summary, attitude accounted for the majority of the variance in behavioral intent with perceived behavioral intent and subjective norm accounting for very little of the variance in behavioral intent after removing the variance for attitude (see figure 3)

Program implementation

To further increase the validity of the results, the above quantitative data was supplemented with qualitative and quantitative process data (course evaluations), given to the participants at the end of the course (see Appendices J and K). Scores on the EDECT[sm] course evaluation range from 4.2 to 5.0, the 2 hour CME session ranged 4.0 to 4.7. These results suggest that the program was implemented as planned and the students

reported that the course goals were met. This evaluation reduced Type III errors and

insured adherence to program implementation standards.

Figure 3 - Structural representation of the correlations of variables contained in the
Theory of Planned Behavior for EMTs to change death-related behaviors
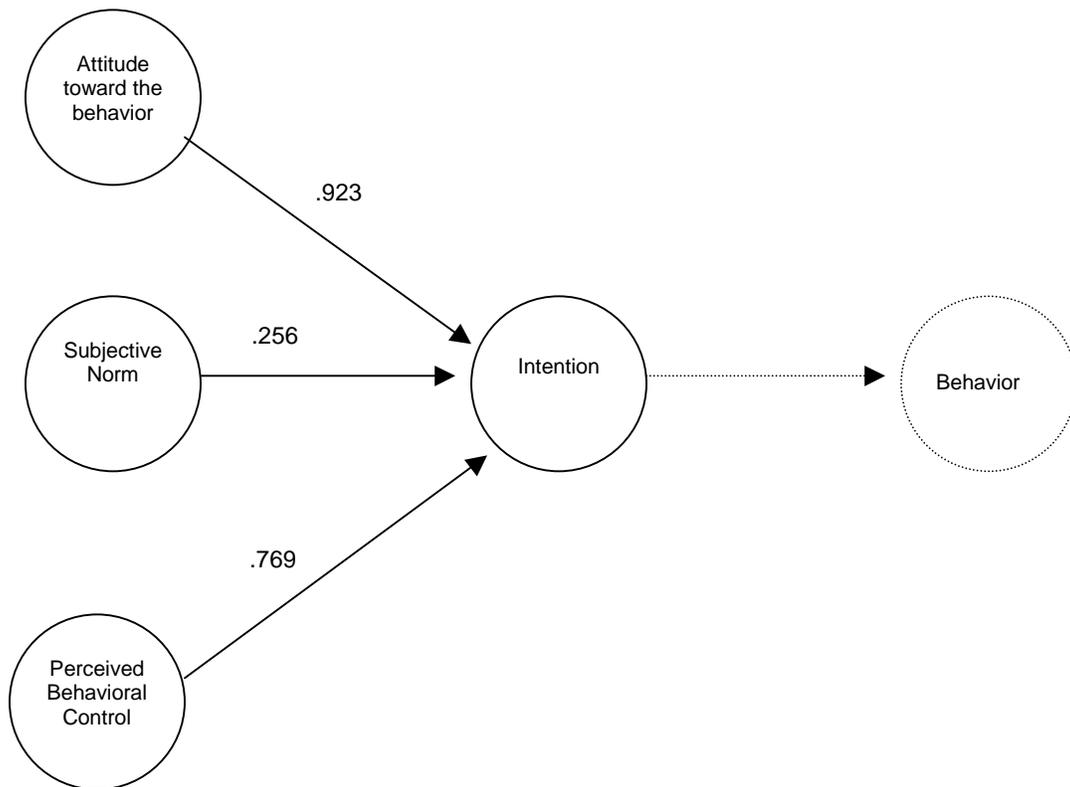
<u>Summary</u>

All of the hypotheses were confirmed. EMTs who received the educational

interventions intend to change their death and dying behaviors more often than EMTs

who did not receive training. Analysis of the questions reveal that EMTs who receive

one of these training programs are more likely to think they have an impact on bereft

families and that death notifications are part of their professional role than EMTs that did not receive training. EMTs report that they feel more comfortable making death notifications after the course. Finally, the correlations among the constructs of the TPB show that attitude has the highest correlation and that it accounts for a significant portion of the variance in behavioral intent.

CHAPTER V - DISCUSSION

<u>Introduction</u>

EMTs represent a unique group of individuals who face death everyday in the course of their jobs. EMTs respond to calls involving dying patients as well as the dead. On these calls, they interact with bereaved families. Many times, EMTs will make a death notification and consol the family. Very few EMTs have had training in these roles, and as a result, few EMTs feel comfortable with these tasks.

Finding educational programs for this group challenges health educators. Very few death and dying programs exist for medical professionals and most do not focus on the needs of EMS providers. Therefore, EMS educators, EMTs, and paramedics often struggle to find education in this area. One potential solution to this educational need is the EDECT^{sm} program and a 2 hour CME session based on the sixth unit of the EDECT^{sm} curriculum.

These two programs differ in their educational style. The EDECT^{sm} program provides students with an experiential experience over two, 8 hour days. The topics are broad and focus on many special aspects of EMS care. Students have an opportunity to interact with other students and role-play death notifications in the EDECT^{sm} program. The 2 hour CME session provides a cognitive and brief educational experience for the student. During the 2 hour CME session, the lecture centers around how to make a death notification. Both courses had received positive results in convenience samples; however, they had not been tested in a controlled study; nor, had the theoretical components been explored.

Therefore, the purpose of this study was to examine these two programs for their effectiveness and to determine the theoretical underpinnings of their effectiveness. After a review of health theory, the Theory of Planned Behavior was selected to evaluate the programs and identify factors that lead an EMT to change his/her behavior (behavioral intent) on-scene with dying patients and bereaved families. This chapter discusses the results from the analysis and provides information to help EMS educators develop future death and dying programs for EMTs and other EMS professionals.

Methodological Considerations

Prior to administration of the programs, an instrument was developed to measure changes in EMTs who received the programs. Recommendations based on the Theory of Planned Behavior for instrument development were used to create the instrument (Ajzen and Fishbein, 1980). Pilot testing of the instrument found good stability, sensitivity, and validity (see chapter 3). The creation of this instrument allowed for evaluation of the programs with a theory-guided measurement tool and subsequent identification of the theoretical underpinnings to program effectiveness.

Subject recruitment was problematic (see chapter 3). After organizations agreed to participate in the study, changes in the paramedic CME requirements caused these agencies to withdraw from the study. Since the pool of EMTs is much larger than the pool of paramedics in the country, EMTs were recruited for the study. A large group of EMTs from several EMS agencies in rural Wisconsin agreed to participate in the study. This limits the generalizibility of the results and will make replication studies using different groups important. Although the sample was not ideal, it created an opportunity

to evaluate and generate interest in the program. In summary, subject recruitment of

paramedics was problematic; therefore, EMTs were used as participants in the study (see

chapter 3).

Pretest and Group Differences

      The three groups (the EDECT^{sm}, 2 hour CME session, and control group) were

found to be statistically equivalent on pretest scores on all the subscales (attitude,

subjective norm, perceived behavioral control, and behavioral intent). The groups also

did not differ on pretest scores for five of the seven dependent variables. On the pretest,

the control group was less likely to leave follow-up information. The control group also

differed from the treatment groups on their intent to use the words "death, died, or dead"

during a death notification. The control group was more likely to use death-related words

during a death notification than the other two groups. This may reflect the age of the

control group. Being the youngest of the three groups, they may feel more comfortable

using death-related words than the other two groups. Younger generations tend to be less

death anxious and more open to use death language (Corr, Nabe, and Corr, 2002).

      The treatment group and the control group were found to be similar on all the

demographic and occupational variables. However, when the three groups were analyzed

separately group differences arose. The EDECT^{sm} group (n=24) was significantly older

than the other two groups. In that group, there were two 70-year-old women, which are

very usual for EMS providers. The two participants' ages artificially elevated the group

mean. When they were removed from the group, age became statistically non-significant.

These two women's pretest scores did not differ statistically from the group; therefore, they were included in the analysis.

The EDECT^{sm} group had a smaller number of participants, as several participants did not come for the 16 hours of training. Perhaps they did not want the 16 hour training but had wanted only to take the 2 hour course. In general, information about these participants is not available; however, three of them were younger and male. Had these and the other three participants completed the study, the groups may have looked more similar demographically.

The Hypotheses

The first six hypotheses evaluated an EMTs intention to change a specific death and dying behavior on-scene. All these hypotheses showed a statistical difference between the treatment and control groups. Testing of the hypotheses suggest that the programs were very effective in this sample of EMTs.

The first six hypotheses were generated from goals of the program. Each dependent variable represented a specific behavior of the EMTs. According to the data, this group of EMTs intends to change their behaviors on-scene involving a death in each of the areas. In addition, each test of the hypotheses was statistically significant at the $p<.001$ level. This suggests that the program goals were achieved, that the programs are very effective, and that EMTs intend to change their behaviors in each of the six areas. However, this does not reflect their actual behavior. An analysis of behavior showing these changes would further validate the program.

One of the most surprising changes in the EMTs was their intention to use the words "death, died, or dead" on-scene. Many EMTs feel that these words are harsh. Moreover, many reported during the course that they did not use these words on-scene. After receiving the training, the overwhelming majority of students reported that they "*strongly agreed*" with using these words. This suggested that attitudes towards using these words changed during the intervention and that the program was effective in changing their intention to use these words.

The treatment group reported that they were more likely to use the 4 step death notification process and successive preannouncements than the control group. This 4 step process represents a central feature throughout the two programs. The instructor introduces, explains, and supports this process thoroughly during the educational program. Since most EMTs have not been presented with a strategy to use in making a death notification, they may be more likely to use the death notification process presented in the program. Therefore, it was not surprising that EMTs intended to change their behaviors in this area. This suggests that the program was very effective in this group of EMTs who changed their intentions to use the 4 step death notification process (and successive preannouncements during the process).

After receiving the training programs, the EMTs intended to leave follow-up information and support the family's grief more often. Changes in these two behaviors were also statistically significant at the p<.001 level suggesting that EMTs will intend to leave follow-up information with family. As the students progress through the program, they start to realize their impact on bereft families. Many testimonials, videos, and data from studies are presented. These, which are more numerous in the EDECT[sm] program

than the 2 hour CME session, show the positive and negative influences that EMS providers have families. Changes in leaving follow-up information and supporting the families after a death may reflect exposure to these educational techniques. It is encouraging that exposure to the programs changes the EMT attitudes and behavioral intentions in these two areas.

The final hypothesis examined the differences in the two treatment groups, the EDECT[sm] group, and the 2 hour CME session group. The results suggest that the EDECT[sm] group intends to change their behaviors more often than the 2 hour CME group; however, the results did not reach statistical significance. In other samples or in a larger study, the two groups may become statistically different. Measuring the participants in a three month follow-up study may also show a statistical difference between the groups as attitudes change over time. The study design may not have captured these changes as attitudes change slowly and may occur well after the administration of a posttest (Bohart and Bergland, 1979; McDonald, 1981). If a follow-up measure was sent to these EMTs, these results may have been significant.

Finding no statistical difference between the two treatment groups raises the issue of the cost-effectiveness of the EDECT[sm] program. If the 2 hour CME session achieves the same results as the 2 day, 16 hour EDECT[sm] program then the cost of offering the longer program would outweigh any benefit. However, the *p* value of .07 suggests that the results neared significance. If the effect size or the sample size were estimated incorrectly, there may not have been enough power to reach statistical significance. The EDECT[sm] group was the smallest of the groups (n=24). A larger sample may have achieved a statistically significant result.

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Secondly, several of the additional questions showed statistically significant results between the two treatment groups. For example, the EMTs who received the EDECT[sm] program were more likely to report that their training to help families and make compassionate death notifications was adequate (after receiving the intervention) than those EMTs in the 2 hour CME session. Even though the intent to change behaviors was statistically equivalent between the two groups, the two groups had differences, statistically significant differences, in other areas.

The differences on the additional questions, coupled with the trend for the two groups to be different on the behavioral intent scale, suggest that the courses should be investigated further to determine their cost-effectiveness. It is premature to say that the EDECT[sm] course is not a cost-effective option. Further research may show that the EDECT[sm] course as a more effective course for changing behaviors and attitudes. However, at this time no conclusion can be drawn on the cost-benefit of either course.

Other Results

These results stem from the questions on the survey that were added to break-up the response sets (see chapter 3). One of the most interesting questions was an EMTs perception of their impact on bereaved families. Before the interventions, the overwhelming majority (77 %) of all three groups agreed an EMT could impact the grief process. After the treatment, the EMTs were even more likely to agree or strongly agree that an EMT's actions can impact grief than the control group. It was encouraging that EMTs recognize their impact on families. This realization may drive EMTs to seek education about interacting with bereaved families.

In a similar research question, information was sought on EMTs perceptions about DNs being part of their duties as an EMT. On the pretest, many (57%) EMTs did not agree that a DN was being part of their professional duties. After receiving the educational programs, more EMTs reported that their professional role included making a DN. The EDECT[sm] group (92%) reported this task was part of their duties more often than the 2 hour CME group (83%). Most (75%) EMTs in the EDECT[sm] group stated they "strongly agreed" that this was part of their duty. In the 2 hour group, only 27 percent "strongly agreed. In general, many EMTs are unsure that their duties include making a death notification. However, after receiving these educational units, most (87%) agree that part of their duties as an EMT includes making a death notification.

Prior to receiving the intervention, only 1.2 percent of EMTs reported they were comfortable making a death notification on-scene and others (14.8 %) reported they were "somewhat comfortable" making a death notification. After the training, the EMTs in the 2 hour CME group did not feel any more comfortable making a death notification than prior to the training. This is not surprising as the concepts are presented very concisely and quickly. Due to the short time frame, little instruction is spent on expanding or reinforcing the concepts. Additionally, the students in the 2 hour CME group do not practice making a death notification. Only the students in the EDECT[sm] group role-play death notifications. For these reasons, the students in the 2 hour CME group gained no additional comfort in making a DN. This suggests that the EDECT[sm] program provided the only instruction that increases an EMTs comfort level when making a death notification.

The next two questions asked EMTs about their training in making death notifications and in helping the families. Most EMTs felt that their training in these two areas was inadequate. On the pretest, 84% of EMTs reported that their training in making death notifications was suboptimal and 83% felt their training to help families was inadequate. Based on the review of the literature, this finding was expected. On the posttest, EMTs who received the EDECT[sm] training program (92%) were more likely to report that their death notification training was adequate than the other two groups on posttest scores (2 hour CME group=43% , control group =21%). EMTs in the 2 hour CME group reported thatthey felt more comfortable with their training, but they were not as comfortable as the EDECT[sm] group. It appears that the EDECT[sm] program makes EMTs feel that their training has adequately prepared them to make a death notification. Similar findings were reported for helping families after a death of a loved one. On the posttest, all the EMTs (100%) in the EDECT[sm] program reported that their training to help families was adequate, whereas only 70 percent of the EMTs in the 2 hour CME group reported their training as being adequate. This further supports the effectiveness of these program and suggests that they warrant further validation in other samples.

The last research question examined the influence of attitude, subjective norm, and perceived behavioral control on behavioral intentions of EMTs exposed to the death and dying programs. Of the three antecedents to behavioral intention, attitude accounted for largest amount of variance in behavioral intent. After attitude was entered into the regression analysis, the other two constructs, subjective norm and perceived behavioral control accounted for very little of the variance in behavioral intent (see figure 3). However, perceived behavioral control has a strong independent correlation with

behavioral intent. This suggests that an EMT's attitudes are related to their intention to perform or not perform a given death-related behavior and that perceived behavioral control influenced an EMT's behavioral intentions. Subjective norm does not play a significant role in determining their intent to perform the behavior. Therefore, educators can create programs directed toward changing an EMT's attitudes (and perceived behavioral control) about death and dying.

Limitations

The most significant limitation was not measuring behavior, the death -related behavior on-scene when death occurs. Although many studies have demonstrated a strong and direct link from behavioral intent to behavior (see chapter 2), this relationship has not been tested in EMTs. Therefore, it is unclear if these EMTs will actually change any behavior related to death and dying on-scene. A follow-up evaluation would be needed to assess behavioral change, which is beyond the scope of this research.

Other limitations include the study design and sampling frame. The study sample (EMTs in Wisconsin) may not be representative of EMTs nationwide; they may be different from EMTs in other counties, states, or demographically different areas. Although the threats to external validity were considered and do not appear to have affected the results, the program should be tested in other samples using different instructors and evaluators. Such studies will increase the external validity of this study.

Threats to the internal validity were also considered in this research effort. Even though each threat was carefully examined, the only sure way to eliminate these threats and increase the internal validity is through randomization. Due to logistics, a

randomized study was not possible. Using a non-random design further limits the contribution of the study. In future studies, a randomized posttest only design should be used instead of the non-equivalent control group design. This would increase the ability to state that the changes in the EMTs were a direct result of the program and not due to an outside factor.

These limitations decrease the usefulness of the study; however, the study makes an important contribution. In this sample, the programs were very successful; therefore, it reasonable to think they could be successful in other samples of EMTs. Additionally, they may be effective in other types of EMS providers, e.g. physicians, nurses, or paramedics. To increase the validity of the program, it should be offered and evaluated in these groups. In summary, the sample characteristics and design limit the ability to state that this program is useful for EMS providers nationwide. However, the positive results suggest that the program should be validated in other samples of EMTs and other types of emergency responders.

Initially, it was thought that EMTs who attended different training programs would not have received the same training on death and dying issues, which would impact the results of this study. A wide variety of death and dying education exists among the EMS professions (Smith and Walz, 1995). However, the results showed that most of the EMTs had no, or severely limited, training in death and dying; thus, they were similar. Therefore, previous training was not a limitation in this study as originally thought.

Another limitation arose from having the program developer present the interventions. The results may be biased and represent the instructor's personal

style/limitations. However, the programs may work with other instructors. These programs need further testing with different instructors to reduce this potential bias and reflect their usefulness when taught by a variety of instructors.

Social desirability, another source of bias, may have influenced the results. Students may have responded in a positive manner to please the instructor. This limitation becomes a concern in educational programs. Open, honest communication was encouraged by the instructor and the administrators. It is hoped that these efforts reduced the effect of social desirability on the results of this study.

Another limitation of the study was that the principal investigator and educator conducted the evaluation, which created further bias. To reduce this bias, all evaluations were anonymous. Students created a unique identification number to use on all their evaluations. The participants were informed that no individual results would be reported, just collective scores from the group. Additionally, the participants were informed that the instructor would not have accessed to code numbers. These measures may have reduced the effect of this bias. However, the program should be evaluated by an outside agency in future studies to reduce this bias.

Another methodological limitation of the study was the terminology on the instrument. Some of the terms used on the survey were terms that many of the EMS providers had not heard prior to the study. For example, one question (# 5) asks the students their intention to use the "four- step death notification process." This process details what the EMT should do during the death notification. For example, the first step is the pre-death phase where the EMTs inform the family about the care and deteriorating condition of the patient. The second step is the actual notification, etc.

On the pretest, some EMTs asked, "what was the 4-step process" or "what was a successive preannouncement." These terms were new to many of the EMTs. After receiving the training and having a clearer meaning of these words, a few EMTs said they had already been using these behaviors but did not use these words to describe their behaviors. Therefore, wording of the questionnaire may have caused students to mark "unsure" on their pretest, which would influence the results. However, this phenomenon would only affect two of the hypotheses (4 and 5). The other five hypotheses are unaffected by this limitation; thus, the overall results would be affected little, if any.

Another limitation evolves from the lack of defined theoretical constructs suggesting hypotheses to measure. The programs, largely atheoretical, required the selection of a theory to measure the outcomes. Using the Theory of Planned Behavior aided in understanding the precedents that underlie behavioral (intent) changes from the program (see Figure 1). After a thorough review of literature, this theory was selected for its fit with the program (see Chapter 2). However, this review and subsequent conclusion to use the TPB may not be the best theory to measure the effectiveness of the programs. However, it did measure behavioral intent and the precedents of intent adequately. Thus, it appears that the initial lack of theoretical constructs did not limit the evaluation of the study and that the use of the Theory of Planned Behavior aided in understanding why the program is effective.

The next limitation was the type of evaluation instrument selected a self-report scale. Although these types of instruments appear widely in health care research and provide an acceptable measure for research such as this, these instruments increase the possibility of error. The instrument asked participants to self-report how they intended to

change their behavior. This exposes opportunities for participant bias. In addition, behavior was not measured, either self-report or actual behaviors. The measurement of actual behavior would help increase the validity of the results. However, observing EMTs behaviors on the scene of a death would pose logistical problems and may never be a realistic option for researchers to consider when designing evaluation studies.

Although many limitations surfaced during this research, the study provides a positive contribution to the scare literature on training EMS providers about death and dying issues. These limitations paved the road for future recommendations.

Recommendations

First, the two programs (EDECT[sm] and 2 hour CME session) should be tested in other samples to increase their external validity. Testing these programs using multiple instructors in multiple groups of EMS providers will further validate the program and increase its usefulness to EMS educators. When these studies are conducted, a more rigorous study design should be selected. A random posttest-only design would increase the internal validity over the non-equivalent group design used in this study.

These future studies should measure behavior, as well as, the other constructs of the Theory of Planned Behavior. These programs should build on the theoretical implications presented in this work. It is important to develop theory-based courses and conduct evaluations using theoretical implications. Moreover, this study creates a starting point for future research.

Even though the goals in this study were achieved, the effect of these programs remains unknown. A follow-up survey measuring behavior would help determine the

effect of the course. A measure of stress before and after the course would also help

understand the impact of the course on EMTs

Additionally, the changes reflected in bereaved families remains unknown. In

future studies, researchers should ask bereaved families to evaluate the behaviors of the

EMTs on-scene when their loved one died, as well as, report about their grief.

Another important contribution of the study was the examination of two different

teaching methodologies, experiential and didactic. This research effort shows that a short

didactic unit and longer experiential session can be effective to teach EMTs about death

and dying issues. However, the contribution of instructional time and teaching

methodology of the success in these courses remains unclear. Additionally, the

interaction between these two methodological issues has yet to be examined. Therefore,

an important recommendation is to draw out the effects of these two variables and their

interaction in future studies

Implications

These programs pave the way for EMS educators to teach about death and dying.

Programs, such as two examined in this study, are needed to train EMTs. These

programs offer an option to EMS educators to teach their EMTs about death and dying.

If the thousands of EMS educators implemented these programs, EMS providers across

the nation may become more comfortable with death and dying on-scene. Their actions

and behaviors may change, which would impact bereaved persons. These programs could

have an enormous impact nationwide.

The positive results of this study were not surprising as the program was received positively in past offerings. What was surprising was the level of significance found in the results. All of the hypotheses were found be significant at the .001 level. This suggests the results had very little chance of being an error. If these programs were effective in other samples, it would eliminate the need to create and evaluate other programs. This would lead to a cost saving for the EMS profession.

Another implication from these programs is the potential reduction in job stress among EMS professionals. If these programs gave EMTs more comfort and less stress during a death notification, then job stress and burnout would be reduced. Prevention of stress and burnout translates into another cost saving for employers of EMTs.

Another important implication was the creation of an evaluation instrument. An instrument was created, pilot-tested, and used to evaluate these two death-related training programs for EMTs. Statistical evaluation showed that it was a sensitive, reliable, and valid instrument that could be used in future studies. Having an evaluation instrument provides educators an opportunity to evaluate their programs. Furthermore, this evaluation tools helps identify the theoretical concepts that lead an EMT to change his/her behavior. Thus, educators can develop targeted programs.

By using the TPB in this study, researchers can now design a population specific program for EMTs to change their attitudes regarding death and dying. Based on the TPB and the results in this study, this change in attitudes may lead to a change in behaviors on-scene when confronted with a death.

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<u>Conclusions</u>

EMTs and paramedics need courses to teach them how to make death notifications and interact with bereft families; they need more training. This provided the rational for this study. These two courses were a potential solution to this training deficit. These courses provided the best available solution as the teaching methods and curriculum stemmed from an analysis of the literature and considered the personality characteristics of EMTs, as well as, the unique differences to death in the prehospital setting. They were evaluated with an established and valid health education theory, and the results confirm that these two courses can be effective in changing an EMT's intention to modify their on-scene death behaviors.

Effective training programs can be created to teach EMTs about death and dying in their occupational environment. Additionally, these programs can be evaluated for their effectiveness, and the theoretical underpinnings for their success can be identified. The TPB was useful in this study for revealing the influences of the factors important to death and dying behaviors in EMTs in rural Wisconsin. Creation of an evaluation instrument, based on the TPB, provided a useful tool to measure these EMTs responses to the two educational units on death and dying.

Finally, the goals of the study were met. The primary goal was to investigate the effects of the EDECT[sm] program and CME session on death-related intentions of an EMTs behavior at the scene of a death. The results show that these programs are effective in this sample. The second goal was to assess the use of the Theory of Planned Behavior to predict death-related behavioral intention in EMTs. The TPB proved to be a useful tool in the analysis of these programs in that it identified the theoretical

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underpinnings for course success. Therefore, this study provided an important step in

creating theoretically based educational programs to train EMS professionals about death

and dying on-scene.

Appendix A - The EDECT[sm] Program

A Death Education Curriculum for Emergency Physicians, Paramedics, and Other Emergency Personnel

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Randy L. Smith, MS, NREMT-P

Abstract

Although death education is a standard component in most medical schools and nursing programs, few include instruction on dealing with sudden death. Typically, death education courses overlook instruction in areas germane to emergency medicine, e.g., making death notifications, interacting with survivors during the immediate grief period, and reducing professional stress innate to working with newly bereaved persons. This curriculum was developed to address the paucity of existing death education materials for emergency professionals. Topics include death perspectives and awareness, death typology, cultural and religious considerations, communicating with bereaved persons, making death notifications, and dealing with initial grief reactions. Units of instruction are outlined, including educational goals, descriptions of units, teaching strategies, and supplemental readings. Key words: physicians; paramedics; death; education; training; curriculum.

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Over the last 20 years, death education courses have gained popularity in colleges and professional health programs. Sporadic at first, these courses are now a standard component in most medical schools and nursing programs. For example, in 1972 only 50% of medical schools offered course work in death education.[1] By 1980, more than 90% of medical schools included death-related curricula.[2] By 1990, 96% of medical schools were offering instruction in death education.[3] Nursing programs also increased death-related curricula in the last decade.[3–6] The same trend occurred in paramedic programs.[7]

Few studies report the educational quality and diversity of death education courses. It is unknown whether professionals are receiving comprehensive instruction on the diverse spectrum of death-related topics. In reviewing the literature, it appears that programs lack universality and tend to address specific or narrow areas of death education. Furthermore, most death education courses do not address death in the emergency setting.

This educational void was unexpected, as many deaths occur in the emergency department (ED) or in the prehospital setting (field). With the advent of futility protocols for paramedics and more terminal patients opting to return home to die, deaths in the ED and the field are likely to increase in the future. Therefore, physicians and paramedics will be asked to make death notifications with increasing frequency. Many physicians and paramedics feel inadequately prepared to make these notifications.[8–12] In addition, studies show that death notifications are stressful tasks for physicians[13–16] and emergency field personnel.[5] The literature suggests that education about death can be a useful strategy to reduce the stress associated with death notifications.[3,9,17] Not only is the paucity of death-related education for emergency medicine professionals surprising, it is concerning, as it may be associated with job stress.

Furthermore, the lack of death-related education for emergency personnel may impact bereaved persons. Due to the sudden nature of death in the ED, bereaved persons are at risk for abnormal grief reactions.[18,19] Emergency physicians will need a heightened education, in comparison with other professionals, to mitigate the traumatic effects of the death to bereaved persons. Furthermore, most notifications are made to unfamiliar persons, thus effective communication skills will be an essential component to making death notifications. Therefore, death education curricula for emergency physicians must be designed to enhance communication skills.

Death in the field is also usually sudden. Like ED physicians, paramedics will need a similar education to interact with bereaved persons after a sudden death. Death notifications in the prehospital setting may be a greater burden for field providers, because there is less ancillary help for paramedics in comparison with physicians, who have the resources of the hospital.

Instruction in death-related issues at the moment of death should be offered as initial course work and also as a continuing education course. Continuing education courses will allow for updates on new theories of grief management and offer an environment to continue improving communication skills. Continuing medical education courses should be made available for all members of the ED staff, i.e., physicians, nurses, and field

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providers (e.g., paramedics, first responders, and fire-fighters).

Inclusion of a death education component to emergency medicine residencies, emergency nurse programs, and emergency medical services (EMS) programs can serve as a valuable tool to help these professionals interact effectively with bereaved persons and help reduce the emotional toll on the provider. Currently, few programs opt to provide this important instruction.

Only a limited number of curriculum guides on death education exist, and even more sparse are death education curricula for emergency personnel (doctors, nurses, and paramedics). To fill this educational void, a death education course for emergency personnel was developed. The Emergency Death Education and Crisis Training (EDECT) program teaches emergency medicine providers to understand the unique characteristics of death in the emergency setting and emphasizes the needs of professionals when interacting with newly bereaved persons.

CURRICULUM DESIGN

Due to the suddenness of death in the ED and the prehospital environment (field), the attributes of these deaths should be discussed including, but not limited to, medical, legal, psychological, and social issues. The course should remain centered around death and grief, but an emphasis should be placed on the uniqueness of dealing with death as an emergency provider.

The following curriculum is designed around eight key topics of death, with specific objectives applicable to the field/ED (Table 1). General death education courses may contain some similar topics but lack units such as making death notifications, dealing with death in the emergency setting, and preparing families for death notifications. These unique topics are what make this program different from other death education courses and a value to emergency personnel.

The course has both cognitive and experiential methodologies. Each section starts with a didactic presentation of the core concepts and theories. A discussion or small group exercise follows. We believe this format is best for creating an environment to enhance cognitive learning and affective processing of new material. We also encourage student participation, demonstration of new skills, and interactive learning to help with long-term retention and mastery of information.

Each unit lasts approximately one hour and 45 minutes. The entire program can be given in a two-day workshop or in separate units over a longer time frame, such as a semester. We suggest offering the class over a longer time period. This helps participants to process information and to decrease the potential overload commonly seen in two-day workshops. Additionally, semester-long courses allow for extended discussions and take-home assignments. However, this

may be impractical for some occupational settings. The course is still of value when offered as a workshop.

Each unit has assigned readings and objectives, and most have scenarios. The readings are drawn from thanatological or emergency-related journals, and were selected because of their applicability to deaths that occur in the field or ED. Handouts, selected from the list in Table 2, should be provided before the start of the class. This enables students to familiarize themselves with the material before each session. The interactive sessions tend to be more useful when students have a basic understanding of theories. Handouts serve as a tool to dispense additional information, as related material is extensive and cannot be covered completely in the allotted time.

The course should be conducted with a primary instructor knowledgeable in all areas of death, dying, and bereavement. Supplemental instructors and/or facilitators can be utilized to develop specific topics. For example, a victims' panel, consisting of family members of sudden death victims, could share their experiences with class participants. This helps students foster an appreciation for the impact of death notifications on family members.

The first session is designed to introduce the course, topics, and reading materials, and to create an environment for sharing death experiences. The initial session is also designed to facilitate value clarification, provide an overview of death, and develop the uniqueness of death in the emergency setting. The topics in other sessions are introduced with a didactic presentation of the material, followed by exercises and/or discussion, which further facilitate comprehension and retention of the material.

When units are interrupted by a time span, the first part of the class can serve as a review to refocus the course. The interactive activities are designed to meet the unit's objectives and often foster further discussion in areas related to the unit. Some units allow for discussion during the presentation of the material. Many participants tend to discuss their own experiences and stories. This is acceptable provided the experience is related to the topic, offers educational value, and is guided by the instructor to ensure positive interactions between participants.

DISCUSSION

Bereaved persons from sudden death in the ED or prehospital environment are at risk for complicated grief reactions. Furthermore, dealing with these deaths is strenuous for emergency professionals. Through compassionate words and actions, emergency personnel can decrease the trauma of sudden death, reduce the number of abnormal grief reactions, and diminish the emotional toll on themselves. Specialty training can enhance the emergency providers' skills in dealing with sud-

Table 1. Emergency Death Education and Crisis Training—Units and Educational Goals

Unit Descriptor	Educational Goal
Unit I—Introduction to Death	
Death Perspectives and Principles	Review of the major concepts, theories, and perspectives on death
Occupational Environment	Distinguish professional differences in death studies and related incidents
Unit II—Legal and Ethical Issues	
Termination of Resuscitation	Review of criteria for withholding CPR and its implications
DNAs/Orders/Advance Directives	Discussion and construction of legal documents
Euthanasia	Understanding the different types of euthanasia; review of the philosophical/ethical dilemmas of euthanasia
Unit III—Influences of Death Typology	
Suicide, Homicide, Environmental, and Violent Death	Recognize the risk factors of the different types of sudden deaths; occurrences
Sudden vs. Anticipated Death	Assess the differences in sudden vs anticipated deaths
Unit IV—Cultural, Religious, and Other Social Issues	
Religion and Death—Catholic, Christian, Jewish, etc.	Review of the major religious influence on death cultures
Culture and Death—Western, Hispanic, Afro-American, etc.	Review of the cultural influence on death customs
Children and Family Issues	Discussion of how death affects family processes and children
Unit V—Communicating with the Bereaved	
Communication Skills	Development of effective listening skills
Intervention with Bereaved Persons	Understanding and using crisis intervention techniques
Facilitative Statements	Discrimination of helpful vs nonhelpful statements
Unit VI—Making Death Notifications	
Barriers to Notifications	Understanding the difficulty of death notifications
Phases and Techniques of Notifications	Review of each phase and strategies to use in death notifications
Postmortem Activities	Discussion of arrangements, autopsies, and organ donation
Unit VII—Grief Reactions	
Manifestations of Grief	Discussion of phases, stages of grief, and current theories
Managing Grief Reactions	Recognize different grief reactions and how to react
Unit VIII—Death in the Field (ED)	
Transitions from the Field to the ED	Team interactions for in-field arrests terminated in the ED
Global Perspectives	Practice scenarios; leave participants with new sense of professionalism in dealing with death

denly bereaved persons. An example of this type of education is the Critical Incident Stress Debriefing (CISD) convention. The primary goal of the CISD curriculum is designed to mitigate the effects of traumatic stress on emergency services personnel, whereas EDECT is designed with the primary goal to decrease trauma to bereaved persons. Reducing the trauma to emergency personnel that is associated with making death notifications is a secondary goal of EDECT. It is important that specialty training courses, such as CISD or EDECT, be included in primary training and continuing education requirements of emergency medicine professionals.

Education focused on death encountered in the field or in the emergency department not only provides useful skills and knowledge for dealing with the bereaved at the moment of death, but also may have the additive benefit of enhancing the emergency providers' communication skills when dealing with other crises, common to emergency settings. It also fosters an awareness of the importance of communication, compassion, and sensitivity when dealing with patients' families during times of crisis. For these reasons, it is imperative for educators to recognize the importance of this type of curriculum.

Emergency providers spend their careers treating the effects of physical trauma and have learned that they can make a difference in the lives of trauma patients. Very little time is spent on learning the required skills to reduce the effects of psychological trauma. If emergency providers realize their actions can reduce the emotional trauma of death, they may be more motivated to acquire these new skills. If emergency providers spend time learning how to treat emotional trauma like physical trauma, they will also learn they can make a difference in the traumatic lives of bereaved persons.

TABLE 2. Emergency Death Education and Crisis Training—Handouts and Supplemental Readings

Unit I—Introduction to Death

Jones WH. Emergency room sudden death: what can be done for the survivors? Death Educ. 1978;2:231–45.

Kastenbaum R, Costa PT. Psychological perspectives on death. Annu Rev Psychol. 1977;28:225–49.

Soreff SM. Sudden death in the emergency department: a comprehensive approach for families, emergency medical technicians, and emergency department staff. Crit Care Med. 1979;7:321–3.

Wortman CB, Silver RC. The myths of coping with loss. J Consult Clin Psychol. 1989;57:349–57.

Unit II—Legal and Ethical Issues

Adams B, Derse AR, Gotthold WE, Mitchell JM, Moskop JC, Sanders AB. Ethical aspects of resuscitation. Ann Emerg Med. 1992;21:1273–6.

Delbridge TR, Fosnocht DE, Garrison HG, Auble TE. Field termination of unsuccessful out-of-hospital cardiac arrest resuscitation: acceptance by family members. Ann Emerg Med. 1996;27:649–54.

Fergues M. In the best interest of the patient. Emergency. 1991; Dec: 34–9, 56.

Schaffner KF, Synder JV, Abramson NS, et al. Philosophical, ethical, and legal aspects of resuscitation medicine III. Discussion. Crit Care Med. 1988;16:1069–76.

Stoer DA. Advance directives in emergency medicine: medical, legal, and ethical implications. Ann Emerg Med. 1989; 18:1364–9.

Unit III—Influences of Death Typology

Ball JF. Widow's grief: the impact of age and mode of death. Omega. 1977;7:307–33.

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Lord JH. Survivor grief following a drunk driving crash. Death Stud. 1987;11:413–35.

Raymond CA. Study says memories of violent death linger in survivors, triggers psychosocial problems. JAMA. 1988;259:3524–5.

Sheskin A, Wallace SE. Differing bereavements: suicide, natural, and accidental death. Omega. 1976;7:229–41.

Unit IV—Cultural, Religious, and Other Special Issues

American Association of Retired Persons. Customs of Bereavement: A Guide for Providing Cross-Cultural Assistance. Washington, DC: AARP, 1990.

Becknell J. Cultural perspectives: seeing beyond the medical need. J Emerg Med Serv. 1988;23(4):40–2.

Doyle CJ, Post H, Burney RE, Maino J, Keefe M, Rhee KJ. Family participation during resuscitation: an option. Ann Emerg Med. 1987;16:673–5.

Gyulay J. Sudden death — no farewells. Issues Compr Pediatr Nurs. 1989;12:71–102.

Martocchio BC. Factors affecting the survivors response. Nurs Clin North Am. 1985;20:333–40.

Sanders CM. The grief of children and parents. In: Doka, KJ (ed). Children Mourning: Mourning Children. Bristol, PA: Taylor and Francis, 1995, pp 69–93.

Unit V—Communication with the Bereaved

Davidowitz M, Myrick RD. Responding to the bereaved: an analysis of helping statements. Death Educ. 1984;8:1–10.

Pound L. American euphemisms for dying, death, and burial. Am Speech. 1936;11:195–202.

Tolle SW, Bascom BA, Hickman DH, Benson JA. Communication between physicians and surviving spouses following patient deaths. J Gen Intern Med. 1986;1:309–14.

Unit VI—Making Death Notifications

Clark RE, Labeff EE. Death telling: managing the delivery of bad news. J Health Soc Behav. 1982;23:366–80.

Creek LV. How to tell the family that the patient died. Postgrad Med. 1980;68:207–9.

Lord JH. Death notification procedure. MADDvocate. 1988; Jun 11:28.

Robinson MA. Informing the family of sudden death. Am Fam Physician. 1981;23:115–6.

Swisher LA, Neiman LZ, Nilsen GJ, Spivey WH. Death notification in the emergency department: a survey of residents and attending physicians. Ann Emerg Med. 1993;22:1319–23.

Wells PJ. Preparing for sudden death: social work in the emergency room. Soc Work. 1993;38(3):339–42.

Unit VII—Grief Reactions

Fahrni WK. Sudden unexpected death: intervention with the survivors. Ann Emerg Med. 1986;15:54–7.

Duval RA, Zisook S, Faschingbauer TR. Clinical aspects of grief and bereavement. Prim Care. 1979;6:391–402.

Milan P. Sudden bereavement: nursing interventions in the ED. Crit Care Nurs. 1979;10:30–40.

Foster EC, Betz C. When the patient dies: dealing with the family's anger. Dimens Crit Care Nurs. 1984;3:372–7.

Unit VIII—Death in the Field (ED)

Mochi M. Supporting the bereaved: field notification of death. J Emerg Med Serv. 1993;28(12):39–46.

Schulman JL, Rehm JL. Assisting the bereaved. J Pediatr. 1983;102:992–8.

TABLE 2 (cont.). Emergency Death Education and Crisis Training — Handouts and Supplemental Readings

Instructor References

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Davis WK. A program to teach residents humanistic skills for notifying survivors of a patient's death. Acad Med. 1989;64:505–506.

Doyle P. Grief Counseling and Sudden Death. Springfield, IL: Charles C Thomas, 1980.

Reschenbauch J. Before you teach death ed. . . . Health Educ. 1981;Jan/Feb: 53.

Schmidt TA, Norton RL, Tolle SW. Sudden death in the ED: educating residents to compassionately inform families. J Emerg Med. 1992;10:643–7.

Course Text

Doka KJ. Living with Grief after Sudden Loss. Bristol, PA: Taylor and Francis, 1996.

CONCLUSION

This death education curriculum is useful to a variety of providers. It is flexible: it can be offered as an overall modular unit such as a workshop, or presented as sub-units over an extended period of time, such as a semester. The course can be used for continuing education or can be incorporated into primary education programs. The suggested curriculum is a step toward achieving educational materials that will mitigate trauma to bereaved persons at the moment of death. The above curriculum has not been formally evaluated in a controlled study; however, the overwhelming majority of students have positively evaluated the program. Evaluation of the efficacy of our program has been limited to formative qualitative evaluations on individual units. However, a formal summative evaluation on the entire curriculum is anticipated in the future.

Reducing the stress to newly bereaved persons and emergency health providers is the principal goal of this curricula. With this goal in mind, educators can then create a course full of death education principles,[20] while emphasizing the deaths that occur in the emergency setting. A death education program, such as the program presented in this article, is a beginning step in achieving this goal. It is imperative that educators be aware of this goal and equip their students with the skills necessary to effectively deal with these unsettling situations.

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Appendix B - Overview of Programs

The EDECT^{sm} Seminar

The EDECT^{sm} seminar is an experiential training program based on the theoretical

foundations of Knowles (1978) Adult Learning Principles and Bandura's Social Learning

Theory (1977). The programs follow the guidelines in Corr's (1978) model syllabus for

death education courses.

The teaching methods utilized in the seminar are a combination of lectures,

discussions, small group exercises, role-plays, and workbook activities. Presentation of

the material is based on the characteristics of adult learners and EMS personalities. The

goal of the seminar is to change death-related behaviors of EMS professionals by

changing their intentions of on-scene death-related behaviors.

Adult learners are self-directed and desire to improve themselves by learning

material that is important to their intrapersonal growth and well-being (Knowles, 1980).

With the needs of adult learners in mind, the seminar format was created using the

principles of SLT. Role-playing and modeling are examples of the structural components

of the course centered around SLT Theory.

The seminar begins with an introduction of participants and overview of the program.

During this introductory session, there are small group activities and group building

exercises. This aids in the development of discussions, role-plays, and other seminar

activities that occur later in the program. The next session covers the legal and ethical

issues of deaths seen by emergency providers. This session was chosen next, as it is

immediately useful and practical for these adult learners. It also serves to transition from

the medical and technological aspects of death to the more psychological and social

processes of death. This type of transition is needed, especially, for paramedics and

EMTs who often maintain rigid attitudes (Mitchell and Bray, 1990). After lunch on the

first day, the program resumes with a session on the typology of death. This first day

concludes with an examination of the special issues in death, including the cultural and

religious influences. Also included is information on dealing with children after a death.

On the second day, a brief review and introductory session is presented to aid in re-

creation of the learning environment. The day proceeds with communications including

interacting with the bereaved and making the death notification. After lunch, the program

continues with sessions on grief reactions and how to interact with bereaved persons

effectively. The day and the seminar conclude with role-play exercises and practice

scenarios. In this last session, students learn to apply, in totality, skills learned earlier in

the seminar. The last activity is completion of the post-test instruments.

The 2 hour CME session

The curriculum for the 2 hour CME is taken from Unit 6 of the EDECT[sm] program. This

unit covers the death notification process including the four steps, the successive

preannouncements, and the post-mortem discussions. A single instructor presents the

material in a lecture style format aided by a computer-generated presentation program.

The session lasts approximately 1 hour and 40 minutes, allowing for a brief question and

answer period. The question and answer period is spent in a large group format and

interactive discussion is limited.

Appendix C - IRB application

UNIVERSITY OF MARYLAND, COLLEGE PARK
HUMAN SUBJECTS REVIEW COMMITTEE

Departmental Application for Review of Research Using Human Subjects

Please check one: ☒ Initial Application ☐ Renewal Application

Name of Principal Investigator Daniel Leviton Tel. No. (301) 405-2528

Name of Co-Investigator N/A Tel. No.

Administering Department of Project Community and Public Health

E-Mail Address of P.I. dl16@umail.umd.edu E-Mail Address of Co-P.I.

Campus Address of P.I. College of Health and Human Performance, College Park, MD ZIP 20742

Name of Student Investigator Tracy L. Smith Tel. No. (410) 795-9126

Student Identification No. & E-Mail Address 549-49-8937 tlsmith@jwgm.umd.edu

Name of Student's Advisor Daniel Leviton

Signature of Student's Advisor
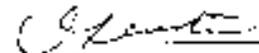
Project Duration (mo/yr – mo/yr) 04/02 -- 12/02

Project Title The Effect of Two Death Education Programs on Emergency Medicial Technician-Paramedic

Funding Agency & ORAA Proposal Ident. No. (if any) N/A

Please attach a copy of your responses to question I – VI of the instructions (on page 2 of this document),
including all related documents, such as questionnaires, interview questions, surveys, etc.

Please check the appropriate box below to indicate whether you are requesting an exemption from further human subjects
review and list the number of any exemption categories (described on page 4 of this document) which you believe applies to
your project ☒ Exempt (list all possible category numbers) 1,2 ☐ Non-Exempt

If exempt, please briefly describe the reason(s) for exemption. Your notation is simply a suggestion to the HSRC.
Research being conducted in educational setting to compare two programs and teaching methods. Research using educational tests.
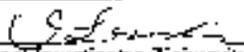
Date _____ Principal Investigator (University of Maryland, College Park employee)

Date _____ Co-Principal Investigator

Date _____ Student Investigator
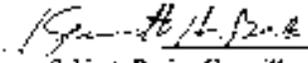
Date _____ Human Subjects Review Committee Chairperson

(PLEASE NOTE: When HSRC Chairperson is also a project investigator or the Student
Investigator's advisor, this line should be signed by another member of the HSRC.)

RECEIVED
APR 19 2002
IRB UNIVERSITY OF MARYLAND
COLLEGE PARK
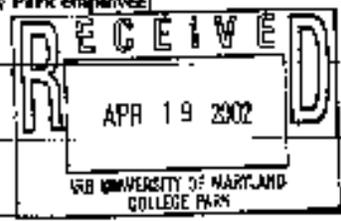
* PLEASE ATTACH THIS COVER PAGE TO EACH SET OF COPIES *
* SEND (3) COPIES WITH ONE CONTAINING ORIGINAL SIGNATURES *
You may send e-mail to irb@deans.umd.edu to inquire about the IRB status of applications.

Please return completed applications to the Chairperson of the Human Subjects Review Committee in your
academic department. Thank you

Page 1 of 5

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The Effect of Two Death Education Training Programs on
Emergency Medical Technician Paramedics

I.   Purpose of the Research

The purpose of this study is to examine the effect of two death education
programs on Emergency Medical Technician-Paramedics by measuring changes in
their behaviors related to death. Few programs are available to teach paramedics
how to make death notifications and respond to the grieving family. Of the few
programs available, most have never been formally evaluated. One such program
is the *Emergency Death Education and Crisis Training*[sm] (*EDECT*[sm]*)* curriculum
(see attached article).

The EDECT[sm] curriculum strives to help EMS (Emergency Medical Systems)
personnel reduce stress to bereaved persons and themselves after a patient's death.
Currently, there are no research studies evaluating the effectiveness of this
curriculum. The second program consists of a didactic 2-hour CME session based
on Unit 6 of the curriculum. Like the full EDECT[sm] curricula, no formal
evaluation studies exist on the impact of the 2-hour CME session. However, the
CME program received positive qualitative evaluations in convenience samples.
The need for death-related programs to help emergency responders manage
bereaved families and the lack of methodologically rigorous evaluation studies of
such programs are the principal factors leading to the proposed study.

II.   Subject Selection

A. The subjects will be 150 healthy licensed paramedics who are all working in
   clinical positions in two county fire departments in Maryland. The
   paramedics, drawn from the total population (n=250) of paramedics in the two
   fire departments, work clinically as paramedics providing prehospital care.
   All paramedics hold National Registry EMT-P certifications and State of
   Maryland EMT-P licenses. A few paramedics in each department primarily
   perform administrative duties and lack eligibility for the study.

B. To be eligible for inclusion in the study, subjects must be working at least
   part-time as a paramedic. Subjects who have responded to a death-related
   incident that evoked severe psychological response will be excluded, as they
   may have strong unresolved thoughts and emotions regarding the call, which
   may be evoked by the curriculum. Subjects will also be screened for a recent
   death of a family member ("has anybody close to you died in the last six
   months"). Those who have had a significant recent personal loss will also be

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excluded from the study. Subject selection will not be based on gender, ethnicity, religion, or other status.

C. Paramedics are being selected for the study, as they are most likely to make a death notification and interact with families at the scene of a death that occurs outside of the hospital. Incorporating the different levels of emergency responders would further confound the study and require a much larger sample size.

III.   <u>Methods and Procedures</u>

The study will incorporate a three group experimental design with a follow-up measure. The investigator has made preliminary contacts with the administrators from the fire departments to assure acceptance and support for the study. After completion of the study, a copy of the results along with interpretations of the findings will be discussed with these administrators.

A letter will be sent to all paramedics asking them to participate in a new educational program (see attached document). To encourage participation, fire department administrators will send a cover letter of support for the study. Volunteers who respond to this letter will become the participants in the study. If there are insufficient numbers of volunteers after the initial mailing, a follow-up letter will be sent to solicit more participants.

After sufficient (150) responses to the recruitment letter(s), the participants will be randomly assigned into three groups. The first group will participate in a 2-day death education workshop using the *Emergency Death Education and Crisis Training^{sm} (EDECT^{sm})* curriculum. The second intervention group will receive a 2- hour didactic Continuing Medical Education (CME) session on making death notifications (Unit 6 of the curriculum). A third group will serve as a control group.

A letter will be sent to paramedics detailing instructions, dates, and times for the educational sessions. The sessions will conducted on site at the fire department training facilities. All participants will receive the instrument at the end of the intervention (see attached documentation). The control group will have the instrument mailed to their home with a stamped return envelope. Administrators from the fire department will help administer and collect the data. Follow-up mailings and on duty telephone calls will be placed to the any non-respondents.

After 3 months, another mailing will be sent to all participants. Follow up telephone calls and mailings will be made any non-respondents to the follow-up measure. The program evaluation process will include quantitative and qualitative process evaluations (see attached documentation). Pilot testing will

completed using a different population of paramedics from a fire department not used in the study population.

IV.   Risks and Benefits

The curriculum consists of death, dying, and grief topics. This education may cause temporary increases in anxiety related to these issues. Generally, courses such as this do not result in any long-term effects. Students at risk for increased or exaggerated responses are being excluded from the study. Each fire department has an Employee Assistance Program available to all paramedics should they have sustained anxiety related to these course topics. The investigator will debrief all participants at the conclusion of the study. All control group subjects will have the opportunity to attend the interventions after completion of the study.

In addition to the education the subjects will receive, there are several benefits to the program. The fire departments will pay paramedics for time spent in the CME classes. Paramedics will also receive CME credits after completion of the course. Paramedics who complete the entire process become eligible to win a $100 in a random drawing.

V.   Privacy and Confidentiality

To protect the privacy of student, the questionnaires will be anonymous and confidential. Each participant will create an identification number to use throughout the research project. No identifying information such as name, address, telephone number is asked of the participants (see attached documentation). Data will be kept in a secure location, and after completion of the study, all data will be destroyed.

VI.   Information and Consent Forms

A. Subjects will be informed that the purpose of the study is to evaluate the effectiveness of training programs about dealing with death in the prehospital environment. Subjects will be provided an overview of the course at the beginning of the course. Subjects will be informed that the education was designed to benefit them professionally as well as personally.

B. Subjects will be informed of the three treatment conditions and of follow-up questionnaire.

C. Subjects will be informed that their participation is voluntarily and they have the right to terminate their participation in the experiment at any time without penalty. They will be informed that CME is only awarded at the completion

of the course as required by the Maryland Institute of Emergency Medical Service Systems guidelines for Continuing Medical Education.

D. None of the information is deceptive. Subjects will be advised that an informed consent will be obtained (see attached documentation).

Appendix D - Informed Consent Form

Identification of Project	The Effect of Two Death Education Programs on Emergency Medical Technician-Emergency Technicians/Paramedics
Statement of Age of Subject	I state that I am over 18 years of age, in good physical health, and wish to participate in a program of research being conducted by Daniel Leviton at the University of Maryland, College Park, Maryland, 20742.
Purpose	The purpose of the research is to determine the effects of different educational programs on paramedics and EMTs.
Procedures	The procedures involve attending class for 2 or 16 hours of continuing education and completion of questionnaires at the completion and three months after the class.
Confidentiality	All information collected in the study is confidential, and my name will not be identified at any time. The data I provide will be grouped with other data provided for reporting and presentation.
Risks	I understand that there may be education related to death, dying, or grief. I understand that this education may result in temporary increases in anxiety related to these issues. I understand that the there are normally no long-term effects associated with the education in this study.
Benefits, Freedom to Withdraw and ask questions	I understand that the study the may help me professionally and personally to deal with death and grief. I also understand that the primary goal of this study is to learn more about how best to educate paramedics about death-related issues. I understand that I am free to ask questions or withdraw from participation at any time without penalty. I understand that the CME credits are awarded only at completion of the program.
Medical Care	I understand that the University of Maryland does not provide any medical or hospitalization insurance coverage for participants in the research study, nor will the University of Maryland provide any compensation for any injury sustained as a result of participation in this research study except as required by law.

Robert Feldman, Ph D
Department of Health Education,
University of Maryland, College
Park, College Park, MD, 20742

Your Name_____

Signature_____

Date_____

I, _____ do hereby give permission to Tracy L. Smith to utilize my scores on the
(Please print name)
Paramedic Training Survey to obtain statistical information for inclusion in her doctoral
dissertation study. I understand that my name and other identifying information will be
help in confidence and that only statistical information will be presented in her work. I
further understand that my agreeing to participate in this study obligates me to nothing
other than the completion of the survey, which will take approximately 15 minutes of my
time.

Signed_____

Date_____

Address:_____

_____

_____

Phone: (___)_____   Code#_____

UNIVERSITY OF MARYLAND COLLEGE PARK
College Park, MD

April 2002

Dear Paramedic/EMT:

Hello, we are offering a continuing education opportunity for you. The programs provide instruction on how you, the paramedic, can better serve the public when a patient dies. The impact of a death notification on surviving family members is enormous. It is important that emergency personnel recognize their impact on the survivors of a patient's death during these death notifications. It is of great concern that most emergency personnel have had limited training for these situations. Paramedics are highly trained in most areas, but most have received minimal training to help families with their initial grief.

The program we are offering has two goals in mind. First, it should help mitigate the trauma suffered by bereaved persons at the time of a patient's death. Secondly, it should reduce the stress of making death notifications and interacting with grieving families. The programs are being as a service to you and your fire department by the University of Maryland College Park, Department of Public and Community Health.

The programs are being studied to determine their effectiveness, and we need your help by participating in a class. What is required of you, should you decide to participate in the study, is the completion of an educational class about death. You will be asked to attend a training session on issues related to death in the prehospital environment. There are two different classes a 16 hour workshop and a 2 hour CME session. Some paramedics/EMTs will be asked to complete their class after a period of time, as they will initially serve as a comparison group. At the end of the class and 3 months after the class you will asked to complete a short questionnaire. The total time to complete the questionnaire is less than ½ hour. There is no pass or fail for the course, and both coursed are approved for CME by MIEMSS.

Should you decide to participate in the study, all information shared by you will remain confidential. Results from all participants are used for statistical purposes only. Additionally, if you complete the study, you will be entered for a **random drawing of $100 in cash**. It is hoped that the information you learn and time spent in the program will be of great benefit to you in your personal and professional endeavors. Thank you for helping evaluate these programs.

Sincerely,

Tracy L. Smith, Ph.D. Cand., PA-C, NREMT-P
Graduate Student
Department of Public and Community Health, Dan Leviton Advisor
University of Maryland College Park

Appendix G - Demographic Questionnaire

ID #_____

Information Sheet

1. Date of Birth_____

2. Gender   M _____   F_____

3. Marital status?   Married   Single   Divorced   Separated   Widowed

4. How many years have you been an EMT-P? _____

5. How may years have you been in EMS?_____

6. On the average how many calls per month do you run?_____

7. What is the highest year of education you completed?

          9 10 11 HS   Grad/College 1 2 3 4   BS 5 6   MS +

8. Has any incident ever bothered you so much that you lost sleep, missed work, had nightmares, lost your cool, or any other serious effects?   Y   or   N

        9a. If yes, was it in the last 6 months?   Y   or   N

9. Has anyone close to you died within the last 3 months?_____

    10a. if yes, what is their relationship to you? _____

10. In an average month how many calls do you respond on that involve a death?
    _____

    2 or less   3 to 5   6 to 10   11-15   more than 15

11. In an average month, how many death notifications do you make?
    2 or less   3 to 5   6 to 10   11-15   more than 15

12. How would you rate your comfort in making death notifications?

Very Comfortable	Somewhat Comfortable	Unsure	Slightly Uncomfortable	Very Uncomfortable

13. Have you ever attended a formal workshop/seminar in death education?   Y   or   N

    If yes, how many hours was the program?_____
    What was the primary focus of the program?_____

ID# _____

Paramedic   Training   Survey

Please circle the letter that you agree with the most. Do not leave any items blank

		Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
1	I intend to use the words "death," "died" or "dead" when making a death notification	A	B	C	D	E
2	On non-crime scenes, I intend to allow families the opportunity to view the body.	A	B	C	D	E
3	I intend to leave families with follow-up information and phone numbers for accessing survivor services	A	B	C	D	E
4	I intend to use successive preannouncements when making a death notification	A	B	C	D	E
5	When making a death notification, I intend to use the 4 step death notification process.	A	B	C	D	E
6	I intend to help reduce the family's grief after a sudden death.	A	B	C	D	E

		Very Beneficial	Beneficial	Unsure	Harmful	Very Harmful
7	My using the words "death," "died" or "dead" during a death notification is	A	B	C	D	E
8	My using successive preannouncements during death notifications are	A	B	C	D	E
9	My leaving follow-up information and phone numbers for survivor services is	A	B	C	D	E
10	My allowing the families to view the deceased is	A	B	C	D	E
11	My using the 4 step death notification process is	A	B	C	D	E
12	My helping families to manage their grief is	A	B	C	D	E

		Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
13	I am confident that I could use the words "death," "died" or "dead" during a death notification	A	B	C	D	E
14	I am confident that I could use successive preannouncements during a death notification	A	B	C	D	E
15	I think that I had adequate training to help families at the time of death	A	B	C	D	E
16	I am confident that I could leave follow-up information and phone numbers with the family	A	B	C	D	E
17	I am confident that I could allow and be with the family when they view the deceased	A	B	C	D	E
18	The role of the paramedic at the scene of a patients death should include making the death notification	A	B	C	D	E
19	I am confident that I could use the 4 step death notification process during a death notification	A	B	C	D	E
20	I am confident that I could reduce the family's grief	A	B	C	D	E

		Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
21	Generally speaking, I do what my supervisors ask me to do	A	B	C	D	E
22	Other paramedics think I should use successive preannouncements during death notifications	A	B	C	D	E
23	My supervisors think I should use successive preannouncements during death notifications	A	B	C	D	E
24	Generally speaking, I do what other paramedics think I should do	A	B	C	D	E
25	Other paramedics think that I should use the words "death," "died" or "dead" during a death notification	A	B	C	D	E
26	My supervisors think that I should use the words "death," "died" or "dead" during a death notification	A	B	C	D	E
27	My supervisors think that I should leave follow-up information and phone-numbers	A	B	C	D	E
28	Other paramedics think it is important to leave follow-up information and phone numbers	A	B	C	D	E
29	I think that the paramedics actions on-scene can impact the grief or recovery of the family	A	B	C	D	E
		Strongly				Strongly

		Agree	Agree	Unsure	Disagree	Disagree
30	Other paramedics think that families should view the deceased	A	B	C	D	E
31	My supervisors think that families should view the deceased	A	B	C	D	E
32	I feel comfortable making a death notification on-scene	A	B	C	D	E
33	Other paramedics think is important to use the 4 step death notification process	A	B	C	D	E
34	My supervisors think it is important to use the 4 step death notification process.	A	B	C	D	E
35	I have adequate training in how to make a compassionate death notification	A	B	C	D	E
36	Other paramedics think it is important for paramedics to reduce the family's grief	A	B	C	D	E
37	My supervisors think it is important for paramedics to reduce the family's grief	A	B	C	D	E

CME Seminar

Would you please take one minute of your time to answer a few questions about the class today? It will help us improve our program.

1. From today's presentation, I learned
    A great deal   quite a lot   some   a little   nothing

2. On the whole, today's class was
    Excellent   pretty good   average   poor   no good

3. I am leaving the meeting
    Enthusiastic   encouraged   all right   disappointed   frustrated

4. As of now, this class interests me
    Intensely   quite a bit   somewhat   a little   not at all

EDECT^{sm} Program Evaluation

Thank you for completing this evaluation. Your responses are confidential and will be used to develop the EDECT^{sm} program further. Please circle the appropriate response number for each statement. Feel free to offer additional suggestions and comments on the back of this form.

The goal of the program is to provide strategies for compassionate death notifications as a means to reduce stress to paramedics and families.

		Yes				No	
1.	Was the stated goal achieved?	5	4	3	2	1	N/A
2.	Was the content well presented?	5	4	3	2	1	N/A
3.	Were the group discussions helpful?	5	4	3	2	1	N/A
4.	Are you more aware of the family's perceptions at the time of death?	5	4	3	2	1	N/A
5.	Do you fell more prepared than before to deliver a death notification?	5	4	3	2	1	N/A
6.	Were the audiovisual materials helpful?	5	4	3	2	1	N/A
7.	Was the instructor well prepared?	5	4	3	2	1	N/A
8.	Was the instructor knowledgeable in the material?	5	4	3	2	1	N/A
9.	Were the practice sessions helpful?	5	4	3	2	1	N/A
10.	Was the training room satisfactory?	5	4	3	2	1	N/A

11.   Please list additional comments:

_____
_____
_____
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_____
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